STAR Program Informal Comments[1]

Note: Lists of commenters and of acronyms and abbreviations used may be found at the end of this document.

Section ... Comment ... From	Comment No. District Response
Overall Comment The proposed STAR program is sound as a matter of science and public health policy. *(KRC, WH)*	Overall-1. No response is needed.
Overall Comment The proposed regulations are based on sound science and analysis and build on experience of other states and regulatory arenas. *(Sierra Club)*	Overall-2. No response is needed.
Overall Comment We support the general framework of the STAR program, including its basic assumptions, health risk goal ($1x10^{-6}$ lifetime cancer risk), regulatory rulemaking process, prioritization of covered chemicals, prioritization of affected companies, and time frame for compliance. *(ALA)*	Overall-3. No response is needed.
Overall Comment We support the effort of Louisville Metro government to develop an air toxics regulatory program to protect public health and the environment. *(EQC)*	Overall-4. No response is needed.

[1]The District will renumber Category 1A TACs to Category 2 TACs in the Draft #2 regulations, and likewise, Category 2 and 3 TACs to Category 3 and 4 TACs. However, for the purpose of this comment/ response document, the District will refer to the Categories as listed in the Draft #1 regulations. Similarly, the District will move and renumber various sections in the Draft #2 regulations, but the references in this comment/response document will remain to the Draft #1 citations, with notes indicating where the District is making significant citation changes.

Section ... Comment ... From	Comment No. District Response
Overall Comment The unlimited scope of the draft STAR program goes beyond any other program in the country, is unworkable at a facility level, and is not justified based on the potential risks to public health. *(GE)*	Overall-5. The District considers the program as drafted to be a reasonable, focused plan to significantly reduce the emissions of toxic chemicals to address known and likely significant risks from these chemicals.
Overall Comment The regulations: • Do not target the chemicals of concern. • Do not clearly identify the sources of the problem chemicals. • Do not set realistic goals/emission limits. • Do not provide a reasonable time frame to implement emission reductions. • Will have other potential consequences. *(GLI)*	Overall-5. The District considers the program as drafted to be a reasonable, focused plan to significantly reduce the emissions of toxic chemicals to address known and likely significant risks from these chemicals.
Overall Comment The District has not adequately considered the cost-benefit relationships associated with the STAR program or the technical and economic feasibility of the program. The program does not appear to be based on sound science. *(AIK)*	Overall-6. The Regulatory Impact Assessment (RIA) will be developed and made available as required by Regulation 1.08. The District considers the STAR Program to be based on sound science. The District notes, however, that some components of the STAR Program are policy decisions.

Section ... Comment ... From	Comment No. District Response
Overall Comment We suggest the regulations: • include a preamble • include a table of contents • follow a linear progression through relevant topics • include relevant material from other sources in the regulation itself, rather than rely on references to other documents *(EPA)*	Overall-7. A preamble and table of contents are not appropriate for these amended and new regulations given the structure of the District's regulations. The regulations fit within the general order of the District's regulations, but the individual regulations need not follow a specific order. Adequate cross references to other regulations are given where appropriate. References to other documents are used where appropriate. In addition, supporting documents describing the STAR Program, including a list and short description of each regulation, were released with the STAR Program and can be viewed on the District's web page at "www.apcd.org/star".
Overall Comment The District obviously used the Michigan model to develop these regulations. However, the Michigan model is inappropriate and should not be used. (Explanation is given.) *(Arkema)*	Overall-8. The District has reviewed all of the state toxics programs. The STAR Program was designed to incorporate the components that the District considered to be the most appropriate for Louisville Metro. The District considers that the proposed approach for evaluating and addressing toxic air emissions is based on sound science, recognizes the credible work of reputable agencies and does not inefficiently duplicate work that has already been done, and provides the highest degree of certainty for regulated sources and the public.

Section ... Comment ... From	Comment No. District Response
Overall Comment An environmental justice component should be added to the regulations that: • Allows West End and Portland residents to relocate to a more suitable area at market value of their homes. • Requires spatial distance from toxic polluting plants. • States that whatever pollution is allowed will not be a liability on the health of citizens. • Requires a moratorium on industry in areas where there is a high density of industries (such as Rubbertown). *(JRC)*	Overall-9. Requiring property buy-outs and relocation are beyond the authority of the Air Pollution Control Board (Board) as provided in KRS 77. The goals and standards of Regulation 5.21 apply to ambient air, which, at a minimum, requires compliance no farther than a company's property line. These goals and standards are set to protect public health and welfare. The benchmark ambient concentrations of Regulation 5.20 are set at levels that, for chronic noncancer effects, are not expected to result in adverse health effects, and, for carcinogens, at a level of risk that is deemed to be protective of public health and welfare. The requirement to demonstrate environmental acceptability for new and modified processes and process equipment is to prevent new toxics problems. Existing toxics problems are addressed on a specific schedule.
Overall Comment **Scope - Chemicals covered** The regulations expand the list of 18 targeted chemicals of concern from the West Jefferson County Risk Assessment listed as above EPA's risk guidelines to 191 chemicals or compound categories without peer review or a scientifically based justification. Additionally, the compound categories listed further expand the scope and impact of the regulations to thousands of chemicals. *(AIK, GLI)*	Overall-10. The District considers the program as drafted to be a reasonable, focused plan to significantly reduce the emissions of toxic chemicals to address known and likely significant risks from these chemicals. The compound categories are included in the Clean Air Act Hazardous Air Pollutant (HAP) list and the U.S. Environmental Protection Agency (EPA) Toxics Release Inventory (TRI) list.

Section ... Comment ... From	Comment No. District Response
Overall Comment **Scope- Chemicals covered** The regulations would over-regulate some very common industrial chemicals and operations. (Explanation given.) *(GE)*	Overall-11. The STAR Program establishes a methodology to determine whether an emission is environmentally acceptable or results in an unacceptable risk. If environmental acceptability is demonstrated, reductions are not required. The District will include a mechanism for exempting emissions that are de minimis.
Overall Comment **Scope - Chemicals covered** The WLATS focused on hazardous organic chemicals. However, the scope of the STAR program has broadened to cover many inorganics at levels that will result in high costs with no corresponding increase in the health of Jefferson County residents. The cost of the program to industry will not provide a corresponding reduction in TACs. *(Süd-Chemie)*	Overall-12. The West Louisville Air Toxics Study (WLATS) monitored for many chemicals, both organic and inorganic. Four inorganic chemicals were monitored at risk levels greater than one in one million. The District considers the program as drafted to be a reasonable, focused plan to significantly reduce emissions, and risk, from toxic chemicals, both organic and inorganic.

Section ... Comment ... From	Comment No. District Response
Overall Comment **Chemicals covered** The expansive chemical list has no rational basis. *(AIK)*	Overall-13. There is a sufficient basis for addressing the Category 1, 1A, 2, and 3 TACs. The Category 1 TACs were chosen because of the high concentrations, and associated risk, monitored in the WLATS. The Category 1A TACs were chosen because of their role in the high level of risk determined for Jefferson County by EPA Region 4. The risk derived from the Risk-Screening Environmental Indicators (RSEI) model was based on reported actual emissions of those TACs. The Category 2 TACs are listed by the EPA because these hazardous air pollutants "... present the greatest threat to public health in the largest number of urban areas ..." [Clean (CAA) Air Act Section 112(k)(3)(B)(i)]. The Category 3 TACs are the hazardous air pollutants (HAPs) listed pursuant to Section 112(b) of the CAA because these chemicals "present, or may present, through inhalation or other routes of exposure, a threat of adverse human health effects (including, but not limited to, substances which are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction, or which are acutely or chronically toxic) or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition, or otherwise ..." [CAA Section 112(b)(2)].
Overall Comment **Chemicals covered** The program falls short of being comprehensive in the number of covered chemicals. *(ALA)*	Overall-14. The STAR Program focuses on the chemicals of the most concern, but establishes mechanisms for evaluating other TACs and requiring information and reductions where appropriate.

Section ... Comment ... From	Comment No. District Response
Overall Comment **Scope – Sources covered** Applicability should not be triggered primarily by permit type. The regulations target Title Vs and FEDOOPs primarily, but some of these may be major or synthetic minor because of emissions other than TACs (VOCs, PM_{10}). Some may emit no TACs. The regulations should only be triggered by a meaningful level of TAC emissions, such as 10 t.p.y. of an individual HAP or 25 t.p.y. total HAPs. *(Borden, Pro-Tek)*	Overall-15. In general, Title V and Federally Enforceable District Origin Operating Permit (FEDOOP) companies are the largest emitters of HAPs, emitting more than 97% of the reported HAP emissions from stationary sources. Most of the TACs listed in Regulation 5.23 are HAPs. (Note, the Group 2 stationary sources include FEDOOP companies and companies that emit more than 25 tons of certain criteria pollutants. For simplicity in this document, reference to FEDOOP sources will also include these other companies.) If a company emits no listed TACs, then emissions data and environmental acceptability demonstrations are not required.

Section ... Comment ... From	Comment No. District Response
Overall Comment **Scope – Sources covered** It is not equitable to subject industry to these regulations and not mobile sources, off-road sources, gas stations, dry cleaners, and others, many of which may be in residential areas. *(AIK, Solae, Zeon)* Mobile sources are not included even though this source sector is a major contributing factor to the toxics issue in Louisville. Other cities, including Cleveland and Philadelphia, have included mobile sources in their toxics programs. *(Arkema, GLI)* These regulations focus on industrial source emissions only. They exempt or ignore many sources of risk. EPA's assessment of air toxics risks indicates that risks are not driven by major stationary sources. Continued ratcheting down on major sources is unlikely to make a substantive reduction in either localized or national risk. Meaningful risk reduction is likely to necessitate a comprehensive look at the primary contributions to the problem in the community. *(ACC, Arkema, DDE, Solae)*	Overall-16. The STAR program will evaluate these other source categories and develop appropriate abatement programs. Gas stations and dry cleaners will be reviewed as area sources and any necessary reductions will be effected through source category-specific regulations rather than through case-by-case plans developed by the individual facilities. The STAR Program establishes the structure for determining environmental acceptability for emissions from these other source categories. The District will draft a regulation requiring the District to develop a plan and schedule for action to assess and address risks from the TAC emissions of smaller stationary sources, area sources, non-road mobile sources, and mobile sources.

Section ... Comment ... From	Comment No. District Response
Overall Comment **Scope – Sources covered** Other stationary sources which do not fall in Groups 1 and 2 should be phased into the program. In addition, the District should have a time line for addressing toxic emissions from area and mobile sources. *(ALA)*	Overall-17. Group 1 and 2 stationary sources emit more than 97% of the reported HAP emissions from stationary sources. However, the District will draft a regulation requiring the District to develop a plan and schedule for action to assess and address the risk resulting from TAC emissions of smaller stationary sources, area sources, non-road mobile sources, and mobile sources. As appropriate, the District will draft amendments to these regulations and draft new regulations to expand the STAR Program for consideration by the Board as additional issues of concern are determined.
Overall Comment **Scope – Sources covered** The regulations exempt or do not even address the primary sources of at least half of the Category 1 air toxics including: 1,3-butadiene, carbon tetrachloride, benzene, methylene chloride, chloroform, chloroprene, formaldehyde, perchloroethylene, and vinyl chloride. *(GLI)*	Overall-18. Future elements of the STAR Program will address the non-industrial sources of these emissions (the District considers that 100% of the chloroprene emissions are from one industrial source). The highest concentration monitored of 1,3-butadiene is more likely to be the result of the largest single source of emissions, an industrial source.
Overall Comment **Scope – Sources covered** The STAR program adds little to improve air quality since industrial sources contribute a small percentage to the overall emission base. *(IISRP)*	Overall-19. The largest monitored risks from the WLATS were in close proximity to large industrial sources of these chemicals. Reductions in these industrial emissions will result in significant reductions in the ambient concentrations of TACs in the vicinity of these industrial sources. An analysis by EPA Region 4, the 2002 *Relative Risk Screening Analysis*, demonstrated that there was a significant cancer risk in Jefferson County resulting from the emissions of stationary sources.

Section ... Comment ... From	Comment No. District Response
Overall Comment **Scope - Sources covered** Please incorporate the exemption found in existing Regulations 5.11 and 5.12 for "Laboratory equipment used for chemical or physical analysis or experimentation" (also in District Reg. 2.02 sec. 2.3.27). Otherwise, teaching and research laboratories which use extremely low quantities of TACs would be subject to the full range of these regulations simply because we have a Title V permit for coal and natural gas-fired boilers. *(UofL)*	Overall-20. The District agrees that such an exemption is appropriate for the STAR Program and will include several mechanisms to exempt de minimis emissions and processes.
Overall Comment **Scope - Sources covered** Please incorporate an exemption for R&D laboratories and for quality testing and new and existing product development in facilities that do not produce commercial quantities of materials. *(Süd-Chemie)*	Overall-21. The District agrees that such an exemption is appropriate for the STAR Program and will include several mechanisms to exempt de minimis emissions and processes.
Overall Comment **Scope - Sources covered** Please exempt Title V insignificant activities (District Reg. 2.16 sec. 1.22.1.3) from the requirements of these regulations. *(UofL)*	Overall-22. The District agrees that this or a similar exemption is appropriate for the STAR Program and will include several mechanisms to exempt de minimis emissions and processes.
Overall Comment – Scope **Chemicals and sources covered** For initial monitoring, emission inventory development, and reporting requirements, the entire list of chemicals in Regulation 5.23 should apply to both new and existing sources. Compliance demonstrations for Categories 2 and 3 could be phased in over a longer time frame. *(ALA)*	Overall-23. Regulation 5.21, as drafted, would require an evaluation of only the Category 1 and 1A TACs from existing sources so that limited resources, for both the District and the regulated community, would be used to focus on the chemicals of most concern. The Category 2 and 3 TACs were added for new and modified sources to prevent new problems.

Section ... Comment ... From	Comment No. District Response
Overall Comment – De minimis exemption There should be a de minimis exemption like South Carolina's. Michigan has a de minimis level of 200 lb./month of non-carcinogens. Without a de minimis exemption, insignificant hazards are treated as stringently as major hazards. *(Arkema, DDE, Engelhard, GE, PPG)* Please provide a de minimis exemption from applicability of these regulations. *(AIK, Süd-Chemie, UofL)*	Overall-24. The District agrees that the STAR Program regulations should include a de minimis concept. The District will include a mechanism for exempting from review emissions that are de minimis, although the approach will be different than that used in either South Carolina or Michigan. The District notes that the Michigan de minimis level, as specified in R 336.1226 *Exemptions from the health-based screening level requirement* for a chemical that is neither a carcinogen nor a "high concern toxic air contaminant," is less than 10 pounds per month and 0.14 pound per hour.
Overall Comment – District Resources Permitting How will the District handle the extra workload with its current backlog? Currently, the backlog of construction permit applications is over a year. With the implementation of the STAR program, we anticipate it will take over two years to get a construction permit. This seriously jeopardizes a facility's ability to plan or expand. *(AIK, GLI, DDE, KPC, Noveon, PPG)* The proposed increase in work for the District, despite potential new hires, will only lead to further backlogs of traditional modifications, which in turn will delay the implementation of projects that would actually reduce air contaminants. For instance, there are at least three companies that are currently waiting on construction permits for new pollution control equipment. *(AIK, Süd-Chemie)*	Overall-25. The District's 2005 budget included approval of five additional positions. Three of these five additional positions could be directly involved in the review of environmental acceptability for TACs in construction permits. With these additional resources, the current backlog would not increase. The District is sensitive to the construction permit backlog issue.

Section ... Comment ... From	Comment No. District Response
Overall Comment – District Resources The District should add staff positions to ensure success of the program. For instance, response to and investigation of odor complaints should be better staffed. *(REACT)*	Overall-26. The District will endeavor to assure adequate staff to implement the District's various programs.
Overall Comment – District Resources The District will need to add an appropriate number of toxicology and air toxics experts to its staff to implement this program. *(Arkema, R&H*)	Overall-27. The District's plan recognizes the District's needs for Fiscal Year 2005 (FY05 - July 1, 2004, to June 30, 2005).
Overall Comment – District Resources What is the justification for the 7 new positions mentioned during the September 17, 2004, meeting which would be created over the next two years? *(Solae)*	Overall-28. Implementation of the STAR Program will increase the responsibilities and workload of the District. Five additional District positions have been approved for FY05.
Overall Comment – District Resources For the regulations to improve air quality, the District must commit staff and resources to actively pursuing enforcement against those facilities that are exceeding their emission limits. *(EIP)*	Overall-29. The District agrees that the STAR Program regulations need to be adequately enforced. Much of the effort in the early stages of implementation of the STAR Program will be to establish environmentally acceptable emission limits.
Overall Comment – District Resources Enforcement of these regulations will overwhelm the District and threaten its ability to meet its statutory obligations, including issuing permits. *(FBT)*	Overall-30. The District's plan recognizes the District's needs to implement the STAR Program in FY05.
Overall Comment – Implementation We encourage the District to obtain monitoring equipment that tracks upset releases to their source, and software to make this data available on the District's web site in real time. *(GCM)*	Overall-31. The District will be enhancing its capabilities to monitor for toxic air contaminants.

Section ... Comment ... From	Comment No. District Response
Overall Comment **Implementation Time** The program does not provide a reasonable time frame to implement reductions if needed. *(DDE, GLI)*	Overall-32. The District will revise the overall time schedule for implementation of the STAR Program by adjusting the submittal deadlines for enhanced emissions statements pursuant to Regulation 1.06 section 4.2 and adjusting the other deadlines in Regulation 1.06 section 4.3 (related stack and fugitive emission release parameters) and Regulation 5.21 accordingly. The first enhanced emissions statements for the Category 1 TACs will still be for the year 2005 for the Title V stationary sources, but will be 2006 for the FEDOOP stationary sources. (Title V sources may request an extension.) The first enhanced emissions statements for the Category 1A TACs will be for the year 2006 for both the Title V and FEDOOP stationary sources. Although the District considers that the timeframes for implementing compliance plans required by Regulation 5.21 section 3.5 are generally reasonable, the District will add a provision to Regulation 5.21 Section 3 to allow the District to approve a request for limited additional time to implement a compliance plan.
Overall Comment **Implementation Time** The time frame for implementation of compliance plans is too long for TAC Categories 2 and 3 and moderate sources. *(REACT)*	Overall-33. The District evaluated this issue and proposed the shortest time frame that was deemed reasonable, considering the resources needed by the companies as well as the District.

Section ... Comment ... From	Comment No. District Response
Overall Comment **Implementation Time** The District does not allow enough time for implementation of the program. Based on the current language, the programs under the proposed regulations, such as the enhanced LDAR program, would have to be enacted within 30 days. (*OxyVinyls*)	Overall-34. The draft regulations for new programs, such as the enhanced leak detection and repair (LDAR) program (Regulation 1.21), included a schedule for the development and submittal of a plan (Section 13 provides 120 days). The District will review these programs to ensure a reasonable implementation schedule.

Section ... Comment ... From	Comment No. District Response
Overall Comment **Public Participation** A program as significant and complicated as the STAR program should have been developed through a stakeholder process. This is the most effective way to address the community's concerns. We urge the District to begin such a process now rather than rush through the existing package. It could follow EPA's Public Involvement Policy. The regulated community and the public need ample opportunity to participate in the generation of these important regulations. *(AIK, DDE, EID, Ford, FBT, GE, GLI, IISRP, Noveon, R&H, Solae, Zeon)*	Overall-35. Many of the overall concepts for addressing high levels of risk from toxic air pollutants were developed through the multi-year, multi-stakeholder activities of the West Jefferson County Community Task Force (WJCCTF). The District has proposed a specific program and provided an opportunity for informal review and comment. The District has posted the draft regulations and additional information regarding the STAR Program on the District's web page "www.apcd.org/star". Over the course of this informal comment period, the District has held over 50 meetings, with every group that requested a meeting. A list of these meetings will be included with the RIA. The District received over 40 sets of written comments. The District has posted all of the written comments on the District's web page. The District has evaluated all of these comments and suggestions and has provided a written comment/response document. The District will propose changes to the initial program based upon these comments and suggestions. The District will then present a recommended set of STAR Program regulations to the Board. Finally, as required by State law, after approval of the Board to start the formal public review process, there will be at least a 30-day formal comment period and a public hearing before the Board.

Section ... Comment ... From	Comment No. District Response
Overall Comment - Public Participation A "negotiated rulemaking" process will preclude timely implementation of measures that will reduce demonstrated risks to the health of Louisvillians. *(WJCCTF)*	Overall-36. The District agrees that a negotiated rulemaking process would take additional time and considers that there has been, and will be, ample opportunity for public review and comment on the STAR Program regulations, as described in response to Comment No. Overall-35.
Overall Comment - Public Participation Although we are pleased that the APCD has taken time to solicit input from various community stakeholders, soliciting input to correct an already proposed and flawed piece of regulation is not the kind of stakeholder engagement process that will result in a product that will meet this community's needs in an effective or productive way. *(EID)*	Overall-37. Many of the overall concepts for addressing high levels of risk from toxic air pollutants were developed through the multi-year, multi-stakeholder activities of the WJCCTF. Additionally, the District reviewed all of the state toxics programs, some of which have existed for many years. The STAR Program was designed to incorporate the components of these established state toxics programs that the District considered to be the most appropriate for Louisville Metro. The District considers that the community's needs will be met in an effective and productive way through a combination of (1) developing the overall structure of a toxics program that provides a methodology for considering the environmental acceptability of any TAC regardless of the emission source, (2) an initial focus on the largest individual emission sources of the chemicals with known or likely significant risks, and (3) a commitment to assess and address the risk resulting from the TAC emissions of smaller stationary sources, area sources, non-road mobile sources, and mobile sources.

Section ... Comment ... From	Comment No. District Response
Overall Comment **State and Federal requirements** The District should ensure conformity between the STAR program and upcoming CAA 112(f) residual risk standards or KY DEP air toxics rules. *(Arkema*)	Overall-38. The CAA 112(f) residual risk standards do not establish a comprehensive program to address risk. The community, through the Air Pollution Control Board, has the responsibility of establishing an appropriate risk program for the citizens of Louisville Metro. The Kentucky Department of Environmental Protection has just recently begun a process to determine whether it will develop a new state air toxics program. The District is actively participating in the Kentucky process.
Overall Comment **State and Federal requirements** Since the District's and EPA's risk goals (1 $x10^{-6}$) are in the same range, the District should try to coordinate its efforts with EPA's to have a unified approach for Metro Louisville. Otherwise, the potential effect could be double the effort to comply with both post-MACT programs. *(GLI, NPCA, Texas Gas)*	Overall-39. The EPA has not established, and is not likely to establish, a program to consider the total risk from air toxics in Louisville Metro. The air toxics problems in the Louisville area are unique to Louisville and call for a locally-derived, unique abatement plan.

Section ... Comment ... From	Comment No. District Response
Overall Comment **State and Federal requirements** The District should take into account the effect of the federal MACT program. We and other companies will be spending millions of dollars across the country to come into compliance with the HAP standards. Dramatic reductions in HAP emissions should result. *(Ford)*	Overall-40. The District agrees that companies should include the effects of promulgated maximum achievable control technology (MACT) standards when demonstrating environmental acceptability, provided that the change in allowed emissions and the compliance deadlines are identified. However, the initial MACT standards consider only technology, and not the resulting risk. Therefore, the District does not consider the initial CAA Section 112(d) MACT technology standards to be an acceptable replacement for the risk-based STAR Program. The District notes that some MACT compliance dates may be later than the deadlines established in Regulation 5.21 section 3.5. The District will add a provision to Regulation 5.21 section 3.5 that would allow the District, in approving a compliance plan that incorporates a Section 112(d) MACT-required reduction, to extend the compliance date to the MACT compliance date.
Overall Comment **State requirements** What is the connection between the proposed standard and the existing state requirements? *(Solae)*	Overall-41. The state requirement, found in 401 KAR 63:020, does not provide certainty as to what quantity or duration of a potentially hazardous matter or toxic substance is "harmful to the health and welfare of humans, animals and plants." The Kentucky Division for Air Quality (DAQ) has indicated that a carcinogenic risk of 1 in 1,000,000 ($1 \otimes 10^{-6}$) meets this requirement. The STAR Program has established this same $1 \otimes 10^{-6}$ risk level as the goal for a single carcinogen from a single process or process equipment, but the STAR Program provides certainty that this level of risk would be accepted as meeting the 401 KAR 63:020 general duty requirement, which is included in Regulation 5.01 Section 3.

Section ... Comment ... From	Comment No. District Response
Overall Comment **Timing** It (understandably) took the District nearly a year to research and assemble the STAR regulations, but the public got only 3 weeks to comment on them. By releasing the package on September 16, and asking for informal comments by October 8, we have not had enough time to review the regulations and formulate meaningful comments. The District has also stated that it will modify the regulations, as appropriate, in one week and ask the Board to adopt in one more month. This is too hurried and seems to be driven by an arbitrary deadline of having the regulations in place by January 2005. *(AIK, DDE, FBT, GE, GLI, KPC, Solae, Texas Gas, Zeon)*	Overall-42. Over the course of the informal comment period, which has now lasted three months, the District has held over 50 meetings, with every group that requested a meeting. The District has received over 40 sets of written comments. The District has evaluated all of these comments and suggestions and has provided a written comment/response document. The District will propose changes to the initial program based upon a thorough review of these comments and suggestions. The District will subsequently present a recommended set of STAR Program regulations to the Board. Finally, as required by State law, after approval of the Board to start the formal public review process, there will be at least a 30-day formal comment period and a public hearing before the Board.

Section ... Comment ... From	Comment No. District Response
Overall Comment **Unintended consequences** • Compliance will require significant up-front capital costs and ongoing compliance costs. • These additional requirements for process changes or new processes will make it more difficult to respond to market-driven changes in a timely manner. • These will discourage modernization and expansion in Louisville. • Industry in Louisville will be at a competitive disadvantage compared to other locations. Thus, current industry will migrate, and new industry will not locate here. • Small businesses in particular are not equipped to handle the extra requirements of these regulations, especially since there is no de minimis exemption for them. *(DDE, Ford, GLI, NPCA, R&H, Solae)*	Overall-43. The goal of the STAR Program is to provide a safe air environment for the citizens of Louisville. Providing safe air may have associated costs, but it will improve the quality of life, a factor also considered by companies in making decisions on locating new facilities and modernizing and expanding existing facilities. The RIA will address the issue of costs. The initial portions of the STAR Program affect Title V and FEDOOP companies, most of which would not be considered small businesses. The District will include a mechanism for exempting de minimis emissions from review.
Overall Comment **Unintended consequences** Covering all "new or modified" sources provides a strong disincentive for new investment or for prospective employer sources to locate here. The administrative burdens alone will be very burdensome and costly, even for those sources that would ultimately demonstrate acceptable risk levels. The negative economic impact will be real. *(GE)*	Overall-44. The District considers it is appropriate not to allow the construction of new or modified sources that would create new toxics problems. The District notes that the requirement to demonstrate environmental acceptability for new or modified sources applies to only Title V and FEDOOP companies.

Section ... Comment ... From	Comment No. District Response
Overall Comment **Unintended consequences** Based on some preliminary compliance calculations using Regulation 5.22 methods, very few emission points, let alone full facilities, will be able to meet the goals or standards in Regulation 5.21, and the county will not meet the county-wide risk goal or standard. The potential effect is widespread non-compliance and may result in selective enforcement while still not meeting the set goals. The result may be public disappointment and decreased movement of new intelligent businesses to Jefferson County due to uncertainty about the ability to comply with such standards. *(GLI)*	Overall-45. Ambient monitoring in the area of some of the largest industrial sources of toxic air contaminants has verified that there are significant levels of these chemicals. If all sources were in compliance with the requirements of the STAR Program, then the program would not effect any improvements in concentrations known to be unacceptable. The District considers that most companies will develop and implement plans to comply with adopted regulations and that a significant number of enforcement actions by the District will not be necessary. The District will develop a comprehensive plan to assess and address emissions and risk from the other source sectors.
Overall Comment **Unintended Consequences** The program will lead to increased operating expenses for companies (hospitals, LG&E, private industry) which will then be passed on to residents. *(Solae)*	Overall-46. The District has not suggested that providing a safe air environment can be accomplished without costs. The RIA will address the issue of costs.
Overall Comment **Unintended consequences** Implementation will place our facility at an unfair [*sic*] (dis?)advantage with competitors within the United States who would be able to operate under less stringent regulations. (*OxyVinyls*)	Overall-47. The District has the responsibility of protecting public health and welfare in Louisville Metro. There are many state air toxics programs throughout the country. These programs were developed as a result of a growing concern with, and attention to, the problems of toxic air emissions and the failure of the EPA to adequately address these problems. Although these programs are not identical, there are a growing number of state toxics programs that are converging on a $1 \otimes 10^{-6}$ risk for carcinogens and a Hazard Quotient of 1.0 for chronic noncancer effects.

Section ... Comment ... From	Comment No. District Response
Overall Comment **Unintended consequences** The significant capital expenditures and operating costs from the STAR program will make companies subject to it less competitive. Ultimately, manufacturing will leave Jefferson County. *(Süd-Chemie)*	Overall-48. The goal of the STAR Program is to provide a safe air environment for the citizens of Louisville. Providing safe air may have associated costs, but it will improve the quality of life, a factor also considered by companies in making decisions on locating new facilities and modernizing and expanding existing facilities.
Overall Comment The District should use a problem solving methodology such as Six Sigma to define the problem and come up with solutions. Instead, we have gone from an analysis of the data to a solution with no scientific method or process to connect the two. *(EID)*	Overall-49. The WLATS documented, through ambient air monitoring and implementing the risk assessment methodology that was developed by the WJCCTF, that there are a significant number of chemicals in concentrations determined to be of concern. An analysis of the monitoring data shows that the highest concentrations of certain chemicals were found at monitors that were closest to the largest industrial emitters of those chemicals, for example, chloroprene and 1,3-butadiene. Many of the overall concepts for addressing high levels of risk from toxic air pollutants were developed through the multi-year, multi-stakeholder activities of the WJCCTF. Additionally, the District reviewed all of the state toxics programs, some of which have existed for many years. The STAR Program was designed to incorporate the components of these established state toxics programs that the District considered to be the most appropriate for Louisville Metro.

Section ... Comment ... From	Comment No. District Response
1.02 General Comment Add a definition of "actual emissions" to clarify that they include startup, shutdown and malfunction emissions. *(EIP)*	1.02-1. The District agrees that it is appropriate to clarify that "actual emissions," for the purpose of emissions reporting, include emissions during startups, shutdowns, and malfunctions. However, because this would be applicable only to Regulation 1.06, the District will insert clarifying language in Regulation 1.06 so that there will not be a conflict with the federal definition of "actual emissions" that is used in District Regulations 2.04 and 2.05.
1.02 General Comment The definitions should be expanded to include the following additional terms that are used in Regs 5.20, 5.21, and 5.23: goal, standard, chronic noncancer effect, acute noncancer effect, allowed emissions, maximum ambient concentration, and maximum concentration. (*Sierra Club*)	1.02-2. The District will propose definitions for chronic noncancer effect and acute noncancer effect. The District considers that the common usage definitions of the other terms, such as maximum ambient concentration, are sufficient or adequately established.
1.02 General Comment The term "excess emissions" should be defined in this regulation. *(EPA)*	1.02-3. This term is defined in Regulation 1.07 section 1.2. The definition will be moved to Regulation 1.02.
1.02 sec. 1.6 "Ambient air" definition has been revised to include air inside secured plant boundaries, not at the business property line. Why was this changed? *(GLI)*	1.02-4. The added sentence does not change the definition of ambient air with respect to the property owned by the emitting source. When the emissions of "Company A" are being evaluated, ambient air is (1) the air at any property, other than the property of Company A, that is external to a building and (2) the air at the property of Company A that is at a location to which the general public has access. This definition of ambient air has been a long-standing policy of the EPA. See the EPA guidance referenced in the response to Comment No. 1.02-5.

Section ... Comment ... From	Comment No. District Response
1.02 sec. 1.6 The effect of the revised definition of "ambient air" is that risk levels will be applied inside plant boundaries even though there is no access by the general public, thus greatly increasing the chance that risk standards will be exceeded and trigger unnecessary controls. Use of the proposed definition could result in BAC numbers three times more stringent. Including areas not open to the general public is not necessary since workers at those properties are protected by OSHA standards. Instead, the District should use the current EPA accepted and case law definition of ambient air, that is, air to which the general public has access. *(GLI)*	1.02-5. The District disagrees that the current EPA definition exempts the air over any property to which the general public does not have access from being considered ambient air. In fact, most property is private and the owner may restrict access by the general public. The clause involving access by the general public applies to the property of the source of the emissions that are being evaluated for ambient impact. From the April 30, 1987, memo from G.T. Helms, Chief, Control Programs Operations Branch (EPA Office of Air Quality Planning and Standards), "To reiterate, Plant A's property is considered 'ambient air' in relation to Plant B's emissions." This EPA policy memo may be viewed at "http://www.epa.gov/scram001/guidance/mch/ama2.txt". Additional policy memos providing the same policy outcome may be viewed at "http://www.epa.gov/scram001/tt25.htm#guidance" under the main heading "Generic/Recurring Issues" and under the sub-heading "Ambient Air." However, the District will add a provision to Regulation 5.21 sections 2.3 and 2.6 that will allow the District to consider land use and demographic factors in making a determination whether to approve a request for modification of an environmental acceptability goal.
1.02 Sec. 1.6 "Ambient air" should be expanded to clarify that ambient air includes "the atmosphere, external to buildings, that is beyond the property line of that stationary source, to which the general public has access." (Explanation) (*Sierra Club*)	1.02-6. Any air beyond the property line of the emitting source is ambient air for the purpose of determining the ambient air impact of emissions from that source.

Section ... Comment ... From	Comment No. District Response
1.02 sec. 1.6 We question the use of "public access" as a qualifier for defining "ambient air." Occupational exposure of workers in the workplace *outside* of the workplace to emissions from the facility vents and stacks appears to fall in a void if the ambient standards are not measured until the "property line." The use of the "property line" has two unintended consequences. (Explanation). The calculation of ambient concentrations must be such that the maximally exposed individuals outside of the source structure are protected, including workers. (*KRC*)	1.02-7. The draft modified definition is to insure consistency with EPA policy on what constitutes ambient air. See also the response to Comment No. 1.02-5. It is the District's understanding that worker protection on the property of the employer is under the purview of the appropriate occupational health agency and not the District. Occupational health programs protect employees of "Company A" from the emissions of Company A on the property of Company A.
1.02 sec. 1.25 Why was opacity added to the definition of "emission standard"? *(LGE)*	1.02-8. Opacity standards are emission standards. Opacity standards in, for example, Regulation 6.09, are included in the Kentucky State Implementation Plant (SIP). Emission standards include numerical emission limits as well as equipment standards, operational standards, and opacity standards. For example, the maximum achievable control technology (MACT) standard for hazardous air pollutants (HAPs) that applies to Portland cement kilns includes an opacity standard.
1.02 sec. 1.25 "Opacity" should not be added to "emission standard," which is used to identify reportable malfunctions. Reporting of malfunctions of excess opacity should be unnecessary unless there is also an excess of the regulated air contaminant itself. *(Ford)*	1.02-9. The District disagrees. Opacity standards are enforceable requirements independent of mass emission rates. Additionally, the opacity standards in the District's regulations are included in the EPA-approved SIP for particulate matter.

Section ... Comment ... From	Comment No. District Response
1.02 Sec. 1.37 The definition of "malfunction" should be expanded to include emissions that result in exceeding EALs as defined in Reg. 5.21. (*Sierra Club*)	1.02-10. The District intends the enforceable tool for an individual process to be emission standards and not ambient standards. Environmental Acceptability Levels (EALs) are ambient standards and include an averaging time period that ranges from eight hours to one year. An individual emission standard is set at a level that is demonstrated to comply with the EALs.
1.02 sec. 1.37 The revised definition of malfunction includes failures of equipment "that may result in emissions that exceed an applicable emission standard." How is the District going to determine which abnormalities or malfunctions would be defined under an incident that "may result in emissions that exceed an applicable standard"? *(GLI)*	1.02-11. One of the purposes of the information required to be submitted pursuant to Regulation 1.07 for malfunctions is to determine whether an excess emission actually occurred as a result of an equipment failure. The company, after reviewing the situation, would report whether excess emissions occurred. However, the District agrees that the term "may" is overly broad in this context and will change the phrase "may result in" to "causes, or is likely to cause,".
1.02 sec. 1.37 Defining "malfunction" to mean "a failure...that may result in emissions that exceed an applicable standard" would appear to make malfunction reporting the routine, overwhelming the current system, because every upset condition at a facility may result in emissions that exceed an applicable emission standard. Only those malfunctions that actually result in emissions of air contaminants above an applicable emission quantity or rate limit should be reportable. Therefore, the term "may" should be deleted from this provision. *(Ford)*	1.02-12. The determination that a malfunction may result in excess emissions is made by the company. However, the District agrees that the term "may" is overly broad in this context and will change the phrase "may result in" to "causes, or is likely to cause,". The District recognizes that a final determination of whether excess emissions occurred might not be made until after the incident is over. Section 4.5 was added to Regulation 1.07 so that the District would be notified if excess emissions did not occur. Thus, no District resources would be needed to follow up on the initial report that an excess emission may have occurred.

Section ... Comment ... From	Comment No. District Response
1.02 sec. 1.39 The definition of "modification" refers to changes that increase the amount of any air pollutant, but that is not what the definition of "new or modified" process or process equipment in 5.01 sec. 1.9 states. Please explain the discrepancy. *(LGE)*	1.02-13. The definition in Regulation 5.01 was intended in part to determine the applicability of Section 4 of that regulation based upon the timing of the submittal of a construction permit application or the issuance of the permit. The definition of the term modification in Regulation 1.02 would be used to determine whether a construction permit was required. If a construction permit is not required for a change pursuant to the definition of "modification" in Regulation 1.02, then Regulation 5.01 would not apply.
1.02 sec. 1.56 The effect of adding "use" of a process is that every time a facility adds a new material it will be a modification under these rules. The commenter adds 6 - 10 new raw materials and maintenance chemicals each year. It is likely that at least half will contain some possibly minimal amount of a TAC. Therefore, the commenter would have to get a Title V permit mod 3-5 times/year. *(Noveon)*	1.02-14. The District proposed section 1.56.6 to clarify the existing definition and does not consider this to be an expansion of the definition of process. This makes express what was previously implied. The District does not concur that the commenter's situation would necessarily require 3-5 Title V permit modifications each year. There are other methods for reviewing and approving changes, such as these pursuant to a District-only enforceable program, that would be more efficient.

Section ... Comment ... From	Comment No. District Response
1.02 sec. 1.56 The definition of process adds "use of a material." This means any change in material used at a facility will be considered a modification under District rules in the SIP for the TAC regulations. This will bring in a change of MSDS by a vendor officially as a modification under the SIP, and elimination of such changes to qualify as minor Title V and FEDOOP permit changes. *(GLI)*	1.02-15. The District proposed section 1.56.6 to clarify the existing definition and does not consider this to be an expansion of the definition of process. This makes express what was previously implied. The District does not concur that such a change would necessarily require a full Title V or FEDOOP permit modification. There are other methods for reviewing and approving changes, such as these pursuant to a District-only enforceable program, that would be more efficient. Additionally, the District, in addressing the issue of exempting de minimis emissions from review, will add a provision that addresses de minimis listings on Material Safety Data Sheets.
1.02 sec. 1.70 (also **5.23** and **5.01**) The definition of TACs defines many more TACs than required. Instead of the 18 chemicals of concern in the community, it adds 20 more TACs without justification, and a total of 191 when any facility (not just the 173 Title V and FEDOOP facilities) makes the first modification. *(GLI)*	1.02-16. The definition of TAC was intended to be broad and is consistent with Kentucky 401 KAR 63:020 which is not restricted to a specified list of chemicals. The requirement of an environmental acceptability review in Regulation 5.01 sections 4.1.1 and 4.1.2 is clearly limited to Group 1 and Group 2 sources.
1.02 Sec. 1.70 (also **5.23**) The definition of "toxic air contaminant" excludes any air contaminant for which there is a national ambient air quality standard ("NAAQS"). This exclusion is not protective of public health. (Explanation). All air contaminants should be included in the calculations of EALs in Reg. 5.21. (*Sierra Club*)	1.02-17. The District considers that the health effects of a specific chemical for which there is a NAAQS (e.g, carbon monoxide or sulfur dioxide) is adequately reviewed by the EPA in setting the NAAQS.

Section ... Comment ... From	Comment No. District Response
1.02 sec. 1.70 (also **5.23**) This definition of TAC is duplicative of what existing Regulations 5.11 and 5.12 and the 150 EPA MACT regulations already cover. It also creates a potential conflict with existing permit restrictions on TAPs and increased delays in District processing of permit changes required under the proposed regulations. *(GLI)*	1.02-18. The definition of TAC is intended to be different than the specific lists pursuant to the 1986 Kentucky regulations that are incorporated by reference in Regulations 5.11 and 5.12. The federal MACT standards, and the underlying HAP list, focus on source categories and chemicals of national significance and may not address source categories and chemicals of local significance. The savings clauses in Regulation 5.11 and 5.12 specify that toxic air pollutant (TAP) limits that were previously established will end when replaced by TAC limits under the STAR Program. TAP emissions information is currently required to be submitted with a construction permit application to establish compliance with Regulation 5.12. The District is sensitive to delays in issuing construction permits, but considers it important to not issue construction permits for processes that will result in new unacceptable concentrations of chemicals.
1.02 sec. 1.74 Why was the word "welfare" added as a definition and so broadly defined? *(LGE)*	1.02-19. The word "welfare," which is used in many places throughout the existing and draft regulations, was not previously defined. The definition drafted is the federal definition found in Section 302(h) of the Clean Air Act (CAA). Because the District did not intend to change the meaning of this federal definition, the District will change the punctuation to that used in the federal definition.

Section ... Comment ... From	Comment No. District Response
1.02 sec. 1.74 The definition of welfare includes effects not just on people but on soils, plants, animals, man-made materials, visibility and weather. There are no established protocols for evaluating welfare impacts on many of these. • How is a company or the District to evaluate the effects on the weather? • Although there are protocols for evaluating visibility effects, they do not address VOCs and are applied generally over vistas larger than just a few miles inside one county. How will the District evaluate effects on visibility? • What man-made materials are included? *(GLI)*	1.02-20. The definition drafted is the federal definition found in Section 302(h) of the CAA. If the District were to require a specific demonstration, the District would recommend appropriate guidance, including guidance from the EPA.
1.02 sec. 1.74 5.01 sec. 3 prohibits any TAC emissions that could be harmful to the health and welfare of humans, plants and animals. 5.21 sec. 1.1 defines T-BAT partly in terms of "welfare" benefits. Given this definition of "welfare," how will the District determine whether a sources's TAC emissions harm the weather? pose a hazard to transportation? What standards will the District use to determine impacts on economic values or personal comfort or well-being? *(FBT)*	1.02-21. The definition drafted is the federal definition found in Section 302(h) of the CAA. If the District were to require a specific demonstration, the District would recommend appropriate guidance, including guidance from the EPA.

Section ... Comment ... From	Comment No. District Response
1.06 General Comment The regulation should contain an exemption for de minimis quantities, as Michigan and other state and local programs have. As written, the absence of a de minimis exemption has far reaching ramifications to numerous facilities that would not necessarily result in better air quality, but rather inefficient use of resources by both the facilities and the District. *(Engelhard, EcoSolve, GLI, LGE)*	1.06-1. The District agrees and will include a mechanism to exempt de minimis emissions from reporting.
1.06 General Comment Most companies do not have the staff or resources to handle the data collection required by this regulation. The District should tell each affected company what data is required for each emissions unit. *(GLI, LGE)*	1.06-2. The current regulations require companies to track and report their emissions, both as criteria pollutants on a process-level basis and as hazardous air pollutants (HAPs) on a plant-wide basis. The District considers the requirement of a detailed accounting of toxic air contaminant emissions (TACs), most of which are HAPs, to be reasonable, but will adjust some of the submittal dates to provide additional time for companies to develop procedures to track TAC emissions. The District disagrees with the suggestion that it should determine what information would be required for each emissions unit.
1.06 General Comment The reporting required by this regulation should not contradict or conflict with the reporting requirements and schedules of existing permits. *(AIK, LGE)*	1.06-3. The reporting requirements do not contradict current requirements.

Section ... Comment ... From	Comment No. District Response
1.06 General Comment The amount of enhanced emission reporting for affected facilities will off-set little if any fugitive emissions. The District has not justified the need for certain requirements. Please provide RIA information. (*OxyVinyls*)	1.06-4. There are several important and credible studies that document that fugitive emissions, such as from leaks, have been, in some instances, significantly under reported. See, for example, *Measurement and Assessment of Equipment Leak Fugitives in Industrial Ethylene and Other Chemical Sources*, Environ International Corporation, June 2003. The District considers the increased focus on fugitive emissions to be warranted. The Regulatory Impact Assessment (RIA) will be developed and made available as required by Regulation 1.08.
1.06 General Comment The District should realize the cost and time that will be needed to perform the calculations required by this regulation, gather the data, create drawings, install software for data collection, select contractors to gather data, etc. Has the District determined these costs? If so, what information is being used to determine the affected businesses' costs? *(GLI, NPCA, Solae)*	1.06-5. The RIA will be developed and made available as required by Regulation 1.08.
1.06 General Comment Emission inventory reports should follow the same (cut-off) reporting criteria that are required for TRI reporting. It is confusing to have different reporting limits. *(GLI, LGE)*	1.06-6. Emissions reporting levels need to be consistent with the program for which they are required. It is not the intent of the Toxic Release Inventory (TRI) program to develop an emissions inventory to establish the concentration, and thus the risk, of a particular chemical at a specific location.

Section ... Comment ... From	Comment No. District Response
1.06 General Comment – Public Access to Information The regulation should require the District to review and evaluate the emission reports submitted in accordance with the STAR Program, and periodically publish reports that assess the emissions data submitted by the facilities. *(JRC/NBEJN)*	1.06-7. Emission reports submitted to the District are subject to the Kentucky Open Records Act and Regulation 1.08.
1.06 General Comment – Public Access to Information A new section on public review should be added to this regulation. This section should require that all emission statements and supporting information be subject to a 90-day public review and comment period. The public review period should be publicly noticed. A public hearing should be scheduled if requested by any party. A complete copy of the emission statement and entire supporting file should be made available at the library and all draft and final emission statements should be posted on the District's website. (Explanation.) (*Sierra Club*)	1.06-8. Emission reports submitted to the District are subject to the Kentucky Open Records Act and Regulation 1.08. The District will consider posting emissions inventory information on the District's web site after the District has completed its review of the submitted information. The District disagrees that submitted information should be subject to a public review and comment period.
1.06 General Comment – Public Access to Information All company reports and data should be required to be provided to and stored in public repositories at the same time as they are submitted to the District. The repositories should be close to the facilities and easily accessible to community members living close by. *(REACT)*	1.06-9. Emission reports submitted to the District are subject to the Kentucky Open Records Act and Regulation 1.08. The District will consider posting emissions inventory information on the District's web site after the District has completed its review of the submitted information.

Section ... Comment ... From	Comment No. District Response
1.06 General Comment The District should consider incorporating the SARA sec. 313 guidelines for reporting thresholds since they have been developed over the years, have had significant peer review, and have worked well historically. *(Engelhard, GLI)*	1.06-10. The District does not consider that the Superfund Amendments and Reauthorization Act (SARA) sec. 313 reporting thresholds are appropriate reporting threshold levels for the STAR Program. However, the District agrees that a de minimis reporting level is appropriate for the enhanced emissions data required by Section 4. With respect to the emissions reporting requirements of Section 3, the District notes that federal requirements would not allow an exemption from reporting the emissions from insignificant activities.
1.06 sec. 1 By removing the words "in accordance with such requirements as specified in these regulations," it appears that the District has expanded its authority to require emissions or parametric monitoring at any facility for any reason, or no reason. The necessity to invest in monitoring equipment should be tied to the necessity to comply with specific regulatory requirements. This phrase should be reinstated in the regulation. *(GLI, OxyVinyls)*	1.06-11. The last sentence of Section 1 in the current regulation gives the District authority to require monitoring beyond that which is expressly identified in the regulations. Thus, the District is not expanding this authority. The District notes that, due to the evolution of Title V and the requirements for emission standards to be "enforceable as a practical matter," there is a greater emphasis on monitoring.
1.06 sec. 1 The regulation needs to state that alternate monitoring will be allowed where it is not feasible to install or operate in-stack monitors. *(GLI, LGE, OxyVinyls)*	1.06-12. The District considers that alternate monitoring is encompassed in this section.

Section ... Comment ... From	Comment No. District Response
1.06 sec. 1 The in-stack self-monitoring and reporting provisions only require that the owner or operator "maintain records of monitoring data and make periodic reports of these data...at the time intervals required by the District." This severely restricts citizens' ability to monitor and ensure accountability with permit requirements because the required data are not publicly available. This section should be revised to require that all self-monitoring data be submitted to the District electronically on a quarterly basis in the units in which the data are collected. (*Sierra Club*)	1.06-13. The District does not consider it necessary for all monitoring data to be submitted to the District. In some cases, the District requires only that the company maintain the data for at least a specified period of time and make the records available to the District for inspection. In these cases, the company is required to report instances of noncompliance. If the District has reason to suspect that a violation has occurred, the District could review the data to make its own determination of compliance. The District's requirement that the company maintain the monitoring data and report instances of noncompliance is consistent with the general requirements of the federal Title V program as well as the EPA's specific requirements in the MACT standards.
1.06 sec. 2 The District should amend this section to require all facilities to install, operate, and maintain state-of-the-art monitoring equipment that detects air pollutants on a real-time basis and instantly records monitoring data, which should then be available to the public electronically. *(JRC/NBEJN)*	1.06-14. The District considers that the requirement of monitoring, whether for actual emissions or process parametric information, should be selective, based upon a variety of factors, including the significance of the emission and the likelihood that an emission standard would be exceeded.
1.06 sec. 3 The regulation requires the reporting of TAC emissions for sources and chemicals for which there may be no emission factors or other methods to accurately estimate TAC emissions. Thus, this regulation should be expanded to explicitly require stack testing for at least one typical source for each regulated contaminant likely to be present for which there are no valid published emission factors, e.g. emission factors classified in AP-42 as at least C. (*Sierra Club*)	1.06-15. The District would need to review individual situations to determine whether there was no adequate basis for determining the emissions of a specific TAC. The District has general authority to require stack testing if there is no applicable emission factor. However, the District will not require stack testing just because no AP-42 emission factor exists.

Section ... Comment ... From	Comment No. District Response
1.06 sec. 3 If emission factors do not exist for a criteria pollutant or HAP for a given process (emission unit), how should the facility handle the reporting of emissions to the District? *(LGE)*	1.06-16. Questions on estimating emissions of a specific TAC from a specific process should be addressed to the District for a case-by-case review. The handling of trace materials with respect to Material Safety Data Sheets (MSDS) will be addressed in a later comment.
1.06 sec. 3 How does one calculate HAP emissions if no AP-42 emission factors exist for a given process? Will stack tests be required if HAPs are suspected, but no AP-42 emission factor exists? *(GLI, LGE)*	1.06-17. Questions on estimating emissions of a specific TAC from a specific process should be addressed to the District for a case-by-case review. The District has general authority to require stack testing if there is no applicable emission factor. However, the District will not require stack testing just because no AP-42 emission factor exists. (See also the response to Comment No. 1.06-32.)
1.06 sec. 3 The District specifies that EPA's method AP-42 must be used and mandates that emissions data required by the regulation include process or process-specific equipment specific calculations. However, EPA's method AP-42 is not process specific, but facility based. EPA's own EIIP guidance disfavors AP-42 over process-specific emission inventory equations. *(NPCA)*	1.06-18. The listing in section 3.6 of allowed bases of emission factors is not a mandated or prioritized list. Under the current emissions inventory system, many companies report emissions based upon other, more applicable sources of information. The District supports using the most applicable emission factor.

Section ... Comment ... From	Comment No. District Response
1.06 secs. 3 and 4. The emissions and related data reporting and enhanced emissions data for TACs do not require that emissions that occur during malfunctions, startups, and shutdowns be reported. This is a serious omission as a recent study has demonstrated that "annual upset emissions can actually exceed the total annual emissions a company reports to the state" and that "upset emissions release toxic and carcinogenic chemicals that threaten the health and safety of communities already overburdened with toxic pollutants." (*EIP, Sierra Club*)	1.06-19. The current emissions inventory system requires a report of actual emissions, which would include the excess emissions from startups, shutdowns, and malfunctions. Changes to Regulation 1.07 are proposed to ensure that the amount of excess emissions are determined and reported. The District will add a provision to this regulation specifying that any increased emissions that result from startups, shutdowns, and malfunctions are required to be included with the reported actual emissions.
1.06 sec. 3.1 Change "all hazardous air pollutants" to "applicable or suspected hazardous air pollutants" (regulated pollutants emitted in greater than de minimis quantities). Emission factors do not exist for all types of processes. *(GLI, LGE)*	1.06-20. Section 3.1 is the current requirement for reporting HAP (and ammonia) emissions to the District. The District is required to report these to the EPA. It is the intent of this section only to continue the current reporting requirements for annual, plant-wide emissions of all 188 HAPs and ammonia.
1.06 sec. 3.1 There should be some de minimis thresholds, e.g., exclusion of reporting of trivial sources for which no emission reporting is necessary. *(Ford)*	1.06-21. The District agrees that an exemption for reporting the emissions from trivial activities is appropriate for the Section 3 reporting requirements. However, the Section 3 emissions inventory is required by the EPA and the District notes that EPA requirements would not allow an exemption from reporting the emissions from insignificant activities.
1.06 sec. 3.1.1 Should this provision include the year for which the first of these reports will be required? (*EPA*)	1.06-22. A date is not needed. This existing requirement has been in effect since 1993 for HAPs and for a much longer period of time for criteria pollutants and is not being changed. The proposed language is intended to go into effect immediately upon adoption of this amendment, not allowing any gaps in this continued requirement.

Section ... Comment ... From	Comment No. District Response
1.06 sec. 3.1.2 Should this provision include the year for which the first of these reports will be required? (*EPA*)	1.06-23. A date is not needed. This existing requirement has been in effect since 1993 for HAPs and a much longer period of time for criteria pollutants and is not being changed. The proposed language is intended to go into effect immediately upon adoption of this amendment, not allowing any gaps in this continued requirement.
1.06 sec. 3.1.2.1 Add "if the actual emissions from the source are 25 or more tons per year individually of sulfur dioxide, particulate matter, volatile organic compounds, or oxides of nitrogen" *(GLI)*	1.06-24. The intent of this section, which reflects the existing requirement, is for all FEDOOP companies to report actual emissions. The intent of the 25-ton category is to ensure compliance with the Clean Air Act emission reporting requirement that is applicable to ozone nonattainment areas.
1.06 sec. 3.1.3 This section imposes new emission reporting requirements on minor sources beginning with emissions occurring during CY 2005. Will the District notify these minor sources of these new reporting requirements with enough advance notice so that the companies can implement any necessary revisions to recordkeeping protocols by January 1, 2005? *(GLI)*	1.06-25. The current emissions reporting requirements are not changed for these stationary sources; they are required to submit emissions statements once every three years.
1.06 sec. 3.2 The requirement for gasoline facilities to annually report their monthly gasoline throughput should be clarified to read "on or before April 15th of <u>each</u> ~~the~~ year" *(GLI)*	1.06-26. The District agrees that the suggested change adds clarity and will make this change.

Section ... Comment ... From	Comment No. District Response
1.06 sec. 3.2 What is the rationale for triennial reporting of cold cleaner material usage in allowing the District to assess the true environmental impact of these sources? *(GLI)*	1.06-27. For ozone maintenance and nonattainment purposes, the District is required to have a complete volatile organic compound (VOC) emissions inventory. Obtaining this information will provide a more accurate emissions inventory for this source category. This will also provide usage data for the District's review of the environmental acceptability of the emissions of this area source category.
1.06 sec. 3.2 Why is there an exemption for a gasoline dispensing facility that involves the initial transfer of gasoline into the fuel tanks of new motor vehicles at an automobile or truck assembly plant? *(Solae)*	1.06-28. The operation of fueling new motor vehicles at an assembly plant is considered to be a process at this stationary source and thus is not subject to the Regulation 6.40 requirements. (The District notes that these gasoline transfer operations are subject to an equivalent requirement.) Criteria pollutant and HAP emissions from these gasoline transfer operations are required to be submitted annually along with emissions from the other processes at the assembly plant. However, the District will review the environmental acceptability of the emissions from the assembly plant gasoline fueling operations along with the area source gasoline dispensing facilities subject to Regulation 6.40.
1.06 sec. 3.2 Group 1 and 2 stationary sources should be included in the exemption from reporting cold cleaner material usage, as they will already be subject to enhanced emission reporting requirements under sec. 4.3.2; requiring cold cleaner material usage, which is also subject to Reg. 6.40, is duplicative and unnecessarily burdensome. *(GLI)*	1.06-29. Section 3.2 does not contain an exemption for reporting cold cleaner material usage. The District does not intend that section 3.2 apply to Group 1 or 2 stationary sources. Group 1 and 2 stationary sources are currently required to report VOC emissions from all processes and process equipment annually. This would include cold cleaners just as any other process or process equipment.

Section ... Comment ... From	Comment No. District Response
1.06 sec. 3.3 What is the rationale for triennial reporting of coating and solvent usage from motor vehicle and mobile equipment refinishing operations in allowing the District to assess the environmental impact of these sources? *(GLI)*	1.06-30. Starting in 1990, ozone nonattainment and maintenance areas have been required to have a complete VOC emissions inventory every three years. Starting in 1996, mobile equipment refinishing operations were required to submit material usage information. Obtaining this information will provide a more accurate emissions inventory for this source category.
1.06 sec. 3.4 Should this provision require reporting of perchloroethylene use in units of gallons? (*EPA*)	1.06-31. The District agrees that this section should specify that the perchloroethylene usage is to be reported in gallons and will add this to this section.
1.06 sec. 3.6 The District needs to provide guidance for calculating emissions for industry, especially for moderate and minor sources with limited resources. Questions include: • How does one calculate HAP emissions if no AP-42 emission factors exist for a given process? • Will stack tests be required if HAPs are suspected, but no AP-42 emission factor exists? *(GLI, LGE)*	1.06-32. The Group 1 and 2 stationary sources are currently required to submit annual emissions inventory information, including HAPs. There are several methods that have been approved by the District for calculating emissions in the absence of AP-42 emission factors. The District will not require stack testing just because no AP-42 emission factor exists.
1.06 sec 3.6 The District should provide guidance for calculating emissions for industry including those with Title V operating permits. (Explanation) (*OxyVinyls*)	1.06-33. The Group 1 and 2 stationary sources are currently required to submit annual emissions inventory information, including HAPs. The District's permit engineers assist companies with questions regarding how to calculate emissions when requested.

Section ... Comment ... From	Comment No. District Response
1.06 Sec. 3.6 This section should be expanded to explicitly require that the supporting calculations and all data and assumptions used in the emissions calculations be disclosed in the emission statement. Any source tests or other measurement data that is used should be included in full in appendices to the emission statement. All stack tests and other measurements relied on in emission calculations should be certified by an independent P.E. registered in Kentucky as accurate and representative of the source. (*Sierra Club*)	1.06-34. The District has required the annual submittal of emissions information for decades. The District does not consider it necessary for the company to submit all calculations and data used for calculating emissions, although this information is required to be maintained and available to the District for review as deemed appropriate. The District also does not consider it necessary to resubmit full information on an alternate method of estimating emissions after the District's initial approval of the method. A "responsible official," as defined in Regulation 2.16 section 1.35, is required to certify the submitted emissions information. The District considers this sufficient.
1.06 sec. 3.7 Add a provision allowing community members to obtain the raw data used to calculate emissions. A similar provision should be inserted in appropriate sections throughout the regulations. *(REACT)*	1.06-35. All records submitted to the District are subject to inspection under the state open records law and District Regulation 1.08, with the caveat that these requirements exempt confidential business information from inspection.
1.06 sec. 3.7 A requirement should be added that documents should be retained longer than five years in the event of ongoing enforcement, compliance and/or legal proceedings. The length of time for document retention should be extended until legal and/or compliance issues are resolved. This provision should also be inserted in sections pertaining to document retention in the regulations. *(REACT)*	1.06-36. The five-year retention period is required by the Title V regulations. The District considers this time period for requiring the companies to maintain raw data adequate for enforcement purposes.

Section ... Comment ... From	Comment No. District Response
1.06 sec. 4 This section should be changed to give affected companies adequate notice and time to collect the required data. Companies are not presently required to report this data and will not have this information for all of 2004. EPA commonly gives facilities at least 1 year's notice when adding chemicals to the TRI. *(EID, FBT, GE, GLI, LGE, Texas Gas)*	1.06-37. The District, for several reasons, considered that the Title V companies are already tracking much of this information. The emissions of these chemicals are currently required to be reported to both the District by the existing emissions inventory system and the EPA by the TRI system. For the TRI report, total emissions must be split into stack and fugitive. For the District, the criteria pollutant emissions must be reported by process; most HAPs fall into a criteria pollutant category of VOC or particulate matter. For both, the submitted annual plant-wide total is likely to be calculated by summing the individual emission points. Because there has been considerable focused attention on the high concentrations of the Category 1 TACs monitored in the WLATS, the District considers the schedule for the Title V stationary sources to be necessary and reasonable. However, the District will adjust some of the submittal dates for the enhanced emissions statements pursuant to section 4.2 and will adjust other deadlines in section 4.3 (related stack and fugitive emission release parameters) and Regulation 5.21 accordingly. The first enhanced emissions statements for the Category 1A TACs will be for the year 2006 for both the Title V and FEDOOP stationary sources.

Section ... Comment ... From	Comment No. District Response
1.06 sec. 4 The enhanced emissions reporting for "TACs" only applies to Category 1 and 1A TACs, as defined in Reg. 5.23. These two categories include only 38 HAPs. Thus, no reporting would be required for the 153 chemicals in Categories 2 and 3. Many of these excluded chemicals were not analyzed or measured in the *West Louisville Air Toxics Study* or are not reported in the TRI. Therefore, initially, reporting should be required for all categories of air contaminants. *(ALA, Sierra Club*)	1.06-38. The initial focus of the STAR Program is on assessing and addressing the emissions of the Category 1 and 1A TACs. The Group 1 and 2 stationary sources are currently, and would continue to be, required to submit annual plant-wide emissions of all 188 HAPs. With a framework in place from the STAR Program to determine environmental acceptability, the District would have a basis for evaluating these other chemicals. The District has proposed to have specific authority to require the enhanced emissions information identified in Section 4 if deemed appropriate (noting that the District has the general authority to require this information pursuant to KRS Chapter 77).
1.06 sec. 4 Please provide a RIA justifying the time, effort, and expense involved in collecting the detailed real time data required by this section. *(EID)*	1.06-39. The RIA will be developed and made available as required by Regulation 1.08.
1.06 sec. 4.1.3 What is the reasoning behind requesting uncontrolled emission calculations when this regulation applies to monitoring of actual emissions? *(GLI)*	1.06-40. Monitoring of actual emissions documented that there was a problem. The STAR Program is designed to provide county-wide protection of public health and welfare. Uncontrolled emissions relate to the potential for increased emissions above the normal, controlled level of emissions and thus the potential for adverse health effects.

Section ... Comment ... From	Comment No. District Response
1.06 sec. 4.1.3 The definition of "uncontrolled emissions" would yield meaningless information as it does not consider other constraints. The uncontrolled emission of a coating operation, under such a definition, is boundless. Other factors, e.g., product configuration and coating specification, maximum production capability, must be applied to achieve a realistic level. Ramping emissions from actual to potential should be sufficient to determine the maximum expected impact of a facility on the environment. The term uncontrolled should be equated to the term potential and represent that level of emissions which could occur without considering independently operated emission control devices. Interdependent controls and process constraints should not be excluded from determining potential maximum emissions. *(Ford)*	1.06-41. The District agrees that it is appropriate to take these factors into account in determining uncontrolled emissions. The District considers that these factors fit within the concept "physical and operational design" and are thus acceptable to take into account. However, the District will add a sentence to the definition of "uncontrolled emissions" to provide examples of factors that would be included in the "physical and operational design."
1.06 sec. 4.1.3 The term "uncontrolled emissions" as defined in the draft regulation does not represent any actual emission rate and can only be used as a "scare factor" for the public. This term seems to be equivalent to process material throughput. Further, material throughput data is confidential business information (CBI). *(DDE)*	1.06-42. The requirement to provide uncontrolled emissions, as defined, provides additional information to the District to evaluate the potential for emissions that could be harmful to public health and welfare. Data that qualify as confidential business information pursuant to State law and District regulation would be exempt from public review.
1.06 sec. 4.2 Enhanced reporting requirements should be based on the amount of TAC emissions, not permit type. *(Borden*)	1.06-43. In general, the Title V and FEDOOP sources are likely to emit more than minor sources. Additionally, the Title V and FEDOOP stationary sources emit more than 97% of the reported HAP emissions from all stationary sources. The enhanced data reporting requirements for the Title V and FEDOOP stationary sources will provide this information for most of the TAC emissions from industrial sources while affecting a minimum number of companies.

Section ... Comment ... From	Comment No. District Response
1.06 sec. 4.2 Please consider moving the July 15 deadlines to October 15. This will help the regulated community balance the workload throughout the year. (Examples of reports due March 1, July 1, Aug. 29). *(Noveon*)	1.06-44. The District considers it reasonable for the Title V companies to plan to complete the enhanced emissions statements approximately three months after the deadline for submitting the currently required criteria pollutant and hazardous air pollutant emissions statements. The District is, however, proposing to change the submittal dates for the FEDOOP companies to a date three months after the submittal dates for the Title V companies. By having two different submittal deadlines, this will likely decrease the number of companies that may request assistance from the District Engineering staff just prior to the deadline.
1.06 sec. 4.2 The regulation should explicitly state that the contents of the enhanced emissions statements will be available to the public in appropriate public repositories at the same time the information is provided to the District. *(REACT)*	1.06-45. All records submitted to the District are subject to inspection under the state open records law and District Regulation 1.08, with the caveat that these requirements exempt confidential business information from inspection.
1.06 secs. 4.2.1.1, 4.4.2.3, and 4.4 Either 4.2.1.1 should be deleted and/or the requirements of sec. 4.4 that require daily tracking/reporting and maximum hourly and daily rates of each listed TAC for the year 2004 should be deleted. Data that has been collected in 2004 may not include tracking of average and maximum hourly and daily rates because of the late notice to the facilities. From a practical standpoint, these requirements would require software to track average and maximum hourly and daily rates that some facilities may not presently maintain or have not been required to maintain. *(GLI, LGE, NPCA)*	1.06-46. As discussed in the response to Comment No. 1.06-37, the District considers that it is reasonable to require the Title V stationary sources to track emissions starting in 2005 to provide the 2004 emissions information required by section 4.3.2.3. The District considers it sufficient to submit the maximum hourly and daily TAC emission rates, as required by section 4.3.2.3, only once unless there is an appreciable increase. The District will add this exception for one-time reporting to section 4.4.

Section ... Comment ... From	Comment No. District Response
1.06 sec. 4.3 Many of the details required in this section are needed only if the facility opts to run the advanced models in Reg. 5.22. Facilities that have compiled this detailed information for the advanced models of Reg. 5.22 can submit such as part of their modeling effort; for other facilities the requirement of a facility plot plan should be less prescriptive. *(GLI)*	1.06-47. The emission release information is required to be submitted before the deadline for submitting the results of the environmental acceptability demonstrations. Thus, it may not be known whether full modeling would be used. Additionally, the District may need the more detailed information to model the combined impact of multiple stationary sources.
1.06 sec. 4.3.1 The plot plan information should be expanded to include the identification on the plot plan of UTM coordinates of any public roads or rail tracks that run through the property or any other areas within the property boundary to which the public has access. (*Sierra Club*)	1.06-48. Based upon the information required, the District would be able to determine these UTM coordinates.
1.06 Sec. 4.3.2 The process information should be expanded to include particle size data for any process that releases air contaminants as particulate matter. Further, where actual emissions differ from uncontrolled emissions, the control methods used to reduce emissions should be identified and described and assumed control efficiencies should be reported and supported by measurements or engineering calculations, certified by an independent P.E. registered in Kentucky. (*Sierra Club*)	1.06-49. Particle size data are not needed for determining environmental acceptability because the EPA-approved dispersion models that would be used do not take particle size into account. These data may be important in engineering effective particulate emission control equipment. The District would have information on the control equipment installed for a process. The District does not consider it necessary to have the control efficiencies certified by an independent P.E. registered in Kentucky.

Section ... Comment ... From	Comment No. District Response
1.06 Sec. 4.3.3 The stack information should be expanded to include the identification of any stacks that are equipped with rain caps or which receive emissions via a bypass of any of upstream pollution control equipment. If a bypass is feasible, the conditions under which a bypass would occur and the frequency and chemical and physical characteristics of the bypass should be included in the report. (*Sierra Club*)	1.06-50. The District agrees that devices that obstruct a vertically upwards discharge, or a stack configured to have a horizontal discharge, should be identified. The District will add this to section 4.3.3. A bypass situation could result in the release of uncontrolled emissions, one of the reasons for requiring Title V sources to report uncontrolled emissions. However, in a bypass situation, if the uncontrolled emission exceeded the allowed emission, then the company would be required to report the excess emission pursuant to Regulation 1.07. Thus, the District does not consider it necessary to require bypass information pursuant to section 4.3.3.
1.06 secs. 4.3.3 through 4.3.5 Clarification is needed to identify that monitoring is not required to obtain this data for reporting. *(GLI)*	1.06-51. It is not the intent of sections 4.3.3 to 4.3.5 to require new monitoring or testing to obtain the required data. The District expects that the companies will already have or can calculate this information.
1.06 Sec. 4.3.5 The flare information should be expanded to include all of the information required to model flare gas plume rise. This should include maximum volumetric flow rate, the frequency of releases as a function of flow rate, and the flared gas net heating value for all likely flaring scenarios, supported by calculations used to determine the heating value. (*Sierra Club*)	1.06-52. The District will add the phrase “Maximum and average” to the beginning of section 4.3.5.2 and “, temperature, and net heat input” to the end of this section. The District will also add a requirement to provide the flare stack diameter.
1.06 sec. 4.4 Revise this to require resubmittal of uncontrolled emissions calculations only if there is a potential increase in emissions, not simply for every change. *(GLI)*	1.06-53. The District agrees that the requirement to resubmit uncontrolled emissions should be only for potential increases, not decreases, and will make this change to section 4.4.

Section ... Comment ... From	Comment No. District Response
1.06 secs. 4.5 and 4.6 Clauses should be inserted in these sections that clearly state that information required in these sections be made available to the public at the time the information is submitted to the District. *(REACT)*	1.06-54. All records submitted to the District are subject to inspection under the State open records law and District Regulation 1.08, with the caveat that these requirements exempt confidential business information from inspection.
1.06 sec. 4.6 When will the District inform a company that data needs to be submitted or submitted on an accelerated schedule? Given the level of detail and broad extent of the data request, how much time will a company be given to comply with these requirements? *(GLI, LGE, OxyVinyls)* Specify a time frame based on the level of detail that will be needed to conform with data request requirements. (*OxyVinyls*)	1.06-55. The District would inform a company pursuant to section 4.6 when a decision to require the information, or the accelerated schedule in section 4.5, is made. The District would establish a reasonable schedule, based upon the amount and level of detail of information that would be required.
1.06 sec. 5 The certification requirements should be expanded to require than an independent registered professional engineer in Kentucky and a "responsible corporate official" sign and seal all emission statements and supporting information as accurate and representative of the source. (*Sierra Club*)	1.06-56. The District considers the current requirement, for a responsible official to sign and certify submittals, to be adequate.

Section ... Comment ... From	Comment No. District Response
1.07 General Comment We strongly support additional accountability of sources for emissions during, and avoidance of, upsets and malfunctions. Emissions of products of combustion and of incomplete combustion from thermal treatment units can be orders of magnitude higher than during normal operating conditions, and accountability in the area of startups, shutdowns, malfunctions and releases has been lacking. (*KRC*)	1.07-1. No response is needed.
1.07 General Questions Does the $1x10^{-6}$ risk level become the new or amended air emission limit for TACs? How do true minor sources, which are exempt from 5.21, report? How does this relate to hourly limits already in existence because of District regulations 5.11 and 5.12 for TAPs? *(GLI, LGE)*	1.07-2. Process and process equipment emission limits based on the STAR Program will replace any limits in place pursuant to Regulations 5.11 and 5.12. True minor sources are not required to report TAC emissions pursuant to Regulation 1.06 or 5.21. However, all stationary sources are required to report excess emissions due to startups, shutdowns, or malfunctions pursuant to Regulation 1.07.
1.07 General Comment Changes to this regulation affect all sources, not just ones that emit TACs. Changing malfunction reporting procedures will not lessen the environmental impact of any plant incidents; it will only add to the administrative burden of facility staff during already labor-intensive periods of high activity. *(GE)*	1.07-3. Startup, shutdown, and malfunction reporting are current requirements. Increased attention to excess emissions is likely to result in increased efforts to reduce excess emissions.
1.07 General Comment The proposed revisions are significant and very onerous. *(Ford)*	1.07-4. The District considers protecting public health and welfare to be a significant responsibility.

Section ... Comment ... From	Comment No. District Response
1.07 General Comment While we do not foreclose the possibility that the malfunction rules may need revision, doing so in this context has broader implications for which no justification or analysis has been presented by the District. Such changes need to be evaluated on their own merit in a separate rulemaking to ensure meaningful evaluation. *(GE)*	1.07-5. Many of the TACs that were monitored during the West Louisville Air Toxics Study at significant risk levels are VOCs for which excess emissions may occur as the result of startups, shutdowns, and malfunctions.
1.07 General Comment (also **1.02** sec. 1.37) "Malfunction" is redefined in 1.02 sec. 1.37 to include failure of equipment "that may result in emissions that exceed an applicable emission standard." Under these regulations, numerous additional emissions standards will be created. The change in definition implies (defines?) changes in emissions that could be above an emission standard as a malfunction, thus triggering numerous additional unnecessary reporting events. The volume of reporting and documentation required in this regulation would put a great burden on facilities to maintain and the District to review. Some of it is duplicative and unnecessary. The time frame allowed to submit reports is extremely short and in some situations may be unachievable depending on the severity of the malfunction or emergency. *(GLI)*	1.07-6. Emission limits pursuant to the STAR Program are set at a level to protect public health. A company is not required to report pursuant to Regulation 1.07 unless emissions resulting from a startup, shutdown, or malfunction may exceed allowed levels. However, the District will revise this definition to indicate that the failure "causes, or is likely to cause" excess emissions rather than "may result in" excess emissions. A company that complies with its limits would not incur a burden as described in this comment. Comments relating to time frame issues will be discussed in the sections that relate to specific reporting requirements.
1.07 General Comment – Emergencies Language relating to emergencies (events beyond the control of plant operations and equipment dependability, such as acts of nature) should not be removed from this regulation. This is a longstanding provision under state and federal law. Why was it removed? *(AIK, GLI, LGE)*	1.07-7 Emergencies are a subset of malfunctions. The same factors that are currently required to substantiate an emergency will be considered by the District in determining the appropriate enforcement action to take in response to a malfunction.

Section ... Comment ... From	Comment No. District Response
1.07 General Comment – Emergencies Elimination of the emergency defense and the illegal malfunction exemption will make it easier for the District to bring enforcement actions against facilities that are exceeding their emission limits. *(EIP)*	1.07-8. No response is needed.
1.07 General Comment – Emergencies In removing the emergency provisions, the District is inconsistent with the affirmative defense concept in EPA's 9-20-99 memo on SIPs and the "Policy Regarding Excess Emissions from Malfunctions, Startups, and Shutdowns." *(Arkema)*	1.07-9. Neither this EPA memo nor EPA regulations require the District to provide an exemption for emergencies.
1.07 General Comment – District resources This regulation creates redundant, duplicative and burdensome reporting requirements, both for the regulated entities and for the District. For each malfunction, the facility is required to make at least four reports to the District. This means hundreds of reports will be filed with the District. How will the District have the time or manpower to keep up with these, given all the new requirements in these regulations and the fact that the District struggles to meet its current statutory obligations? *(FBT)*	1.07-10. Much of the current burden on the District is in determining whether excess emissions occurred. A new provision specifically requires a company that filed an initial excess emission report to file a negative report if excess emissions did not occur. Further, the revised language highlights that the company is required to identify and calculate the amount of excess emissions that occurred. The District will reduce the number of reports required under this regulation to three.

Section ... Comment ... From	Comment No. District Response
1.07 General Comment – Definition of malfunction (and **1.02** sec. 1.37) The District has expanded what will be considered a malfunction. There is a lack of certainty as to what is a malfunction and it is not well defined in this regulation. *(GLI)*	1.07-11. The District will change the definition of "malfunction" in Regulation 1.02 to specify that a malfunction includes the concept that there may be excess emissions. The current definition of "malfunction" identifies that there is a failure of equipment or a process to operate in a normal or usual manner but does not tie this failure to excess emissions. The District will further revise this definition to indicate that the failure "causes, or is likely to cause" excess emissions rather than "may result in" excess emissions.
1.07 General Comment Throughout this regulation there is a lack of certainty regarding how quickly and in what situation a process will be shut down by the District due to a malfunction. This needs to be well defined to allow businesses to know the extent and consequences of malfunctions. *(GLI)*	1.07-12. It is the responsibility of a company to comply with applicable requirements, including emission standards. The decision to shut down a process or process equipment if the emissions are likely to be in violation of an emission standard rests with the company, not the District. If excess emissions do occur, then the District will determine the appropriate enforcement action to take, based upon consideration of the factors included in section 2.3.
1.07 General Comment This regulation should add a section that requires the use of best available technologies and methods to monitor excess emissions. This section should require routine monitoring of both flares and cooling towers, which are major sources of excess emissions. (*Sierra Club*)	1.07-13. The draft amendment requires emission and parametric monitoring systems for the process or process equipment to be operated during a period of excess emissions unless technically infeasible. Regulation 1.07 is not the appropriate regulation in which to establish a substantive requirement for routine monitoring. Routine monitoring requirements are established in other regulations.

Section ... Comment ... From	Comment No. District Response
1.07 General Comment The regulation should establish enforceable limits to the chemical concentrations in the air at the property line/point of compliance due to and/or related to malfunctions as well as startups and shutdowns. Frequent malfunctions as well as startups and shutdowns result in acute and chronic exposure of fenceline communities to the chemicals released into the air during these events. *(REACT)*	1.07-14. Emission standards at the source are used to ensure compliance with the ambient standards. An excess emission would be a violation of an emission standard and subject to an appropriate enforcement action by the District.
1.07 General Comment The excess emission regulations should be modified to centrally track all excess emissions and to make this information easily accessible to the public using an electronic reporting system similar to that in Texas. Facilities should be required to report excess emissions electronically within 24 hours, and immediately for TACs. The public should be able to access these reports through the District website within 72 hours. (*Sierra Club*)	1.07-15. The District will consider the development of an electronic reporting system for possible future implementation.
1.07 sec. 1.2 Use of "a surrogate emission standard, such as VOCs, that would include that TAC," is duplicative. If emission standards exist for pollutants other than TACs, they should not be randomly substituted to create false emission limits for TACs. *(GLI, LGE)*	1.07-16. A surrogate emission standard would be used to avoid having a duplicate standard. As an example, if, for some reason, a process had a VOC limit of 5 pounds per hour and environmental acceptability was met for TAC A at 6 pounds per hour and for TAC B at 3 pounds per hour (both TAC A and B are VOCs), then the 5 pounds-per-hour VOC limit would also limit TAC A to 5 pounds per hour and the VOC limit would serve as a surrogate limit for TAC A. However, TAC B would need a separate 3 pounds-per-hour limit and the VOC limit would not serve as a surrogate limit for TAC B. The definitions of "excess emission" and "bypass" will be moved to Regulation 1.02.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 1.2 Regarding the statement "excess emissions shall also include an appreciable increase in the emissions of a TAC above the routine level of emissions ": • The terms "appreciable" and "routine level" are too open to interpretation. • "Appreciable increase" should be quantified somehow. It could for instance be any amount above a reportable quantity under CERCLA, EPCRA or SARA. • "Appreciable increase" above "the routine level of emissions" is nebulous and could lead to disputes. *(Arkema, Borden, EID, EPA, GLI, LGE)*	1.07-17. The District will revise the second sentence in the definition of "excess emissions" to provide clarification as to what the baseline emission would be and what increase in this baseline would be considered excess (emissions that exceed 110% of the reported actual maximum hourly emission rate of a toxic air contaminant that results from a startup, shutdown, or malfunction). The definition will be moved to Regulation 1.02. The District disagrees that the reportable quantity under another federal programs would be an appropriate level to use for excess emissions reporting pursuant to Regulation 1.07.
1.07 sec. 1.2 Regarding the statement "excess emissions shall also include an appreciable increase in the emissions of a TAC above the routine level of emissions ": there should be no "excess" emissions if permit levels are not exceeded. Cf. the definition of "malfunction" in Reg. 1.02 sec. 1.37, a failure of equipment "that may result in emissions that exceed an applicable emission standard." Why is the District deeming a situation a malfunction even when there is no exceedance of an established emission limit? *(EID, Ford, GLI, LGE)*	1.07-18. This sentence starts out with "If there is not an applicable emission standard ..." Thus, if there is a permit limit then this sentence would not apply. This sentence has only temporary applicability and would not apply once an emission standard for a TAC is developed pursuant to the STAR Program. In addition, the District will modify this phrase to specify "emissions that exceed 110% of the reported actual maximum hourly emission rate of a toxic air contaminant that results from a startup, shutdown, or malfunction" and will move the definition to Regulation 1.02.
1.07 sec. 1.2 The regulation should define "appreciable increase" above the routine level of emissions. *(EIP, REACT)*	1.07-19. The District will modify this phrase to specify "emissions that exceed 110% of the reported actual maximum hourly emission rate of a toxic air contaminant that results from a startup, shutdown, or malfunction" and will move the definition to Regulation 1.02.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 1.2 There are four problems with the definition of "excess emissions." (1) The first sentence defines "excess emissions"only as emissions that exceed an "applicable emission standard." This excludes TACs. (2) The second sentence suggests that VOCs are an acceptable surrogate for TACs. This is not acceptable. (3) The second sentence defines "excess emissions" as an "appreciable increase.." Appreciable increase should be defined. (4) An appreciable increase of a TAC is defined relative to the "routine level..." There is no such thing as a "routine" level, thus excess emissions should be defined absolutely. (Explanation) (*Sierra Club*)	1.07-20 (1) Emission standards for TACs will be developed pursuant to Regulation 5.21, so this will apply to TACs. (2) An explanation of surrogate emissions and an example are provided in the response to Comment No. 1.07-16. Under proper circumstances, a VOC limit would appropriately limit a TAC emission. (3) and (4) The District willredraft this sentence to provide specificity as to what would be considered an appreciable increase relative to a routine level of emissions.
1.07 sec. 2.1 The District should not require sources to remain in compliance with all emission standards during startups and shutdowns when such standards are specifically not applicable during startups and shutdowns (see Reg. 6.07 sec. 3.2 [3.3.2] and Reg. 7.06 sec. 4.2). *(GLI, LGE)*	1.07-21. If a different limit is established pursuant to a regulation or permit condition to apply during startups and shutdowns, then, during those periods, this alternate limit would be in effect and the routine operation limit would not be in effect.
1.07 sec. 2.1 The regulation should clarify that startup and shut down events will not have separate, higher emission standards when compared to the permit emission limits for emission point sources. *(REACT)*	1.07-22. The current regulations contain different limits for some specific operations. While it is not the intent to develop alternate limits for all processes, this may be reasonable in some instances. However, before establishing those alternate limits, the increased emissions would need to be evaluated to ensure that there was not a violation of the federal NAAQS and increased allowed criteria pollutant emissions (e.g., VOCs or particulate matter) may need to be submitted for approval as a site-specific SIP revision. The increased TAC emissions would also need to be demonstrated to be environmentally acceptable.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 2.1 Shutting down a process may not be necessary to protect public health and it should not be considered as a general duty requirement when time-based emission rates are achievable during malfunctions, even if a technology-based or process-dependent emission limit might be exceeded during one of these events. *(Ford)*	1.07-23. It is the responsibility of a company to comply with applicable requirements, including emission standards. The decision to shut down a process or process equipment if the emissions are likely to be in violation of an emission standard rests with the company, not the District. If excess emissions do occur, then the District will determine the appropriate enforcement action to take, based upon consideration of the factors included in section 2.3.
1.07 sec. 2.2 Excess emissions due to startup, shutdown or malfunction should not automatically be deemed a violation. Sec. 2.3 considerations should be taken into account before the District makes a determination of whether a violation occurred. *(GLI, LGE, OxyVinyls)*	1.07-24. The District proposes that excess emissions would be deemed a violation of the applicable emission standard. The District has proposed criteria to use in determining the appropriate enforcement action to take, which may run from no enforcement action to full enforcement.
1.07 Sec. 2.2 This section should be expanded to include the phrase "an [sic: and?] environmental acceptability level" after "in violation of the applicable emission standard." (*Sierra Club*)	1.07-25. The enforceable level is intended to be at the emission source, i.e., an emission standard, not an ambient concentration.
1.07 sec. 2.2 Instead of any deviation automatically being a violation, the District should use EPA's "credible evidence." It can be used as both an enforcement trigger and as a defense. *(Arkema)*	1.07-26. Credible evidence may be used to establish the level of emissions. Excess emissions, regardless of how determined, are deemed in violation of the applicable emission standard.
1.07 secs. 2.2 and 2.3 This regulation should incorporate EPA Region 4's CEM Enforcement Plan. *(GLI, LGE)*	1.07-27. The District disagrees that EPA Region 4's CEM Enforcement Plan should be incorporated into sections 2.2 and 2.3. This plan is guidance; it is not part of the federal regulations.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 2.3 The District should consider automatic penalties for startups, shutdowns and malfunctions that exceed a certain frequency or magnitude. This would serve as a deterrent and the District could use the funds for an electronic reporting system or health studies. *(EIP)*	1.07-28. Penalties are established pursuant to the District's statutory authority. The District also relies on EPA guidelines that, along with other factors, consider the frequency of the violation and the magnitude of the excess emissions.
1.07 sec. 2.3.5 When determining whether an owner/operator stopped input feed or shut down the process "as soon as possible," the District should take into account the time it takes facility personnel to investigate the cause of the malfunction, and the time it takes to shut down so as to protect facility personnel and not damage the equipment. *(GLI, LGE, OxyVinyls)*	1.07-29. Protection of facility personnel and not damaging the equipment would be considered within the meaning of "consistent with safe operating procedures." While facility personnel are investigating the cause of the malfunction, excess emissions are continuing. The time that it took to initiate a safe shutdown, and the reasons for the delay, would be considered by the District in determining the appropriate enforcement action.
1.07 sec. 2.3.5 The reference to shutting down the process should be deleted. Unless there is potential immediate threat of harm to public health, shutting down the process should not be considered a necessary or expected outcome of a malfunction condition. Emissions during a malfunction can be minimized or kept at levels that are still protective of public health. *(Ford)*	1.07-30. It is the responsibility of a company to comply with applicable requirements, including emission standards. The decision to shut down a process or process equipment if the emissions are likely to be in violation of an emission standard rests with the company, not the District. If excess emissions do occur, then the District will determine the appropriate enforcement action to take, based upon consideration of the factors included in section 2.3.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 2.3.8 Please explain what is meant by "properly signed operating logs." *(GLI, LGE)*	1.07-31. The meaning of this phrase is no different than the same phrase in the current regulation (see section 5.1) nor is it different from the meaning in the EPA's policy on startups, shutdowns, and malfunctions (September 20, 1999, memorandum from Steven A. Herman, *State Implementation Plans (SIPs): Policy Regarding Excess Emissions During Malfunctions, Startup, and Shutdown*, Attachment *Policy on Excess Emissions During Malfunctions, Startup, and Shutdown*, Pages 4, 5, and 6).
1.07 secs. 2.3.8.3 and 2.3.8.4 Please provide examples of what would be sufficient evidence to prove that the malfunction was unavoidable as requested in these two sections. The requirements are vague and could be misinterpreted or misunderstood, causing an undue amount of paperwork. *(GLI, LGE)*	1.07-32. The factors listed in section 2.3.8 are essentially the same factors included in the existing definition of "emergency."
1.07 sec. 2.4 Please explain the purpose for adding the sentence, "Nothing in this regulation shall be construed to restrict any person from seeking injunctive relief from an excess emission." *(GLI, LGE)*	1.07-33. The intent of this sentence was to clarify that the rights of third parties are not affected by this regulation. However, because this will be true regardless, this language has been removed from the regulation.
1.07 sec. 2.6.3 E-mail notification date and time should be determined by when the e-mail was sent by the facility, not when it was received by the District. *(GLI, LGE)*	1.07-34. The District agrees, and this is what is specified in section 2.6.3, "... the date and time identified as sent..." The rest of the sentence means that the District did receive the e-mail, but does not mean the date and time that the District's e-mail system received the e-mail.

Section ... Comment ... From	Comment No. District Response
1.07 secs. 3 and 4 The District should establish an electronic reporting system whereby companies must report their excess emissions online and the information is accessible on the District's website. The system used in Texas is a good example. *(EIP)*	1.07-35. The District will consider the development of an electronic reporting system for possible future implementation.
1.07 sec. 3.1 This provision seems to require owners to notify the District prior to expected excess emissions during planned activities. Is the intent to require owners to notify the District when they intend to violate the regulations? (*EPA*)	1.07-36. Yes, if excess emissions are expected during startup or shutdown.
1.07 sec. 3.1 Add a provision allowing the District to require facilities to postpone planned startup or shutdown in cases where it would make ambient air quality unacceptable. *(EIP)*	1.07-37. The District disagrees that it should include a provision that would allow the District to mandate when a company is allowed to start up or shut down a process.
1.07 sec. 3.1 This section requires only that the District be notified in writing 3 days before planned startups and shutdowns that release excess emissions. This section should be modified to require that both the District and the affected public be notified of planned startups and shutdowns to allow the public to leave the area, shelter in place, or take other actions to protect itself from the excess emissions. (*Sierra Club*)	1.07-38. In addition to discouraging planned excess emissions during startups and shutdowns by removing the provision that would allow excess emissions to not be deemed a violation under certain circumstances, another purpose of amending this regulation is to require the submittal of excess emissions information so that the District may evaluate whether these increased emissions cause acute adverse health effects. Emission standards are set for a variety of reasons, and the occurrence of an excess emission does not necessarily mean that a threat to public health would occur. The District will consider posting information on startups and shutdowns on its web site in the future.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 3.2 Change to read that notification to the District will be made "within 1 hour or as soon as possible" to allow some flexibility in situations that may be labor-intensive. *(GLI, LGE)* For reasons explained, notification of emergency startups and shutdowns should be tiered. When notification must be made to the National Response Center (NRC) and/or local emergency responders (LEPC), then notification should be made to the District. However, when notification to NRC or LEPC is not needed, then the current reporting ("as promptly as possible, but no later than one day following the determination to startup or shutdown") should be sufficient. In addition, written notification should be made only once the emergency situation is resolved and review can be made to assess the matter, typically 7 days after the event or after emission computations can be made. *(Ford)*	1.07-39 In general, starting up and shutting down a process or process equipment is a normal part of the operation of the process or process equipment. Thus, the effect on emissions resulting from a startup or shutdown should, in general, be known by the owner or operator of the process or process equipment. This is a different situation from a malfunction; the District notes that section 3.2 excludes from this provision an unplanned startup or shutdown that is necessitated by a malfunction. The District considers the reporting requirements for unplanned startups and shutdowns to be reasonable. However, in recognition that the time allotted by the phrase "no later than the end of the day" depends upon when during the day the decision to startup or shutdown is made, the District will revise this phrase to provide a fixed 24 hours for written verification of a telephone notification.
1.07 sec. 3.2 This section requires only that the District be notified no later than 1 hour following the start of an unplanned startup or shutdown that releases excess emissions. This section should be modified to require that both the District and the affected public be notified of malfunctions via community alarm system or automatic telephone calling system. (*Sierra Club*)	1.07-40. Startups and shutdowns that are necessitated by a malfunction are treated as part of the malfunction and not in section 3.2. The District's response regarding this issue for malfunctions will be made following the comment on section 4.1.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 3.3 The District should establish a different after-hours reporting mechanism and require only one type of after-hours report, instead of both written and voice mail reports. *(GLI, LGE)*	1.07-41. The purpose of the after-hours report to the District's voice mail system is to allow District staff to retrieve the reported information from a remote location. If the District were to receive an air pollution complaint associated with excess emissions via the District's after-hours paging system, the District could confirm the cause and extent of the excess emissions without traveling to the District's office to read a notice that was sent via FAX, and determine more quickly an appropriate District response.
1.07 sec. 3.3 The immediate notification requirement (one hour) should be satisfied with a call to 911. This prevents unnecessary duplication of efforts when resources are best employed resolving the immediate situation. *(EID)*	1.07-42. Startups and shutdowns that are necessitated by a malfunction are treated as part of the malfunction section and not in section 3.2. The District's response regarding this issue for malfunctions will be made following the comment on section 4.1. The District notes that it would be unusual for excess emissions during a startup or shutdown to be reported via the 911 system.
1.07 sec. 3.4 Please explain how an unplanned startup can be necessitated by a malfunction. How is an unplanned startup defined? *(GLI, LGE)*	1.07-43. Process A experiences a malfunction and is shut down. Identical Process B, that is used when Process A is not operating, is started. The malfunction for Process A was not planned, therefore, the startup of Process B was not planned. An unplanned startup is a startup that was not planned three days in advance of starting up the process or process equipment.

Section ... Comment ... From	Comment No. District Response
1.07 Sec. 3.5 This section sets out the information that must be provided in the initial notification pursuant to Secs 3.1 and 3.2. The required information should be expanded to include the method of calculating emissions; the amount by which the emissions exceed regulatory limits; the regulatory limits that apply; calculations to determine if Regs 5.01 and 5.20-5.23 are complied with; and the methods that will be used to monitor emissions. (*EIP, Sierra Club*)	1.07-44. The District considers the "quantity and concentration of excess emissions" to be the same as the amount of the exceedance. However, the District will add the method for calculating excess emissions to section 3.8.5. The District will also add to section 3.8.5 a requirement to identify the applicable emission standard that was exceeded. The enforceable provision of the STAR Program as it relates to industrial sources is an emission standard, not an ambient concentration. Section 3.6.4 requires monitoring that is routinely in place to be continued during excess emissions unless technically infeasible.
1.07 sec. 3.5.7 At the time of the initial notification, the risk of excess emissions may only be a possibility, and the reason would be unknown. Therefore, this information should be optional on the initial notification. The information can be given in follow-up reports. *(GLI, LGE)*	1.07-45. The excess emissions information required by section 3.5 is intended to reflect what is expected to occur. The report in section 3.8 requires information relating to what actually occurred. This follow-up information may either confirm or change the original estimation.
1.07 sec. 3.6 Not "all" of the requirements listed will necessarily minimize emissions. Consider the startup of a boiler. Typically, a boiler should be started up slowly (not quickly) to minimize unnecessary excessive wear to the boiler and to minimize emissions. Thus, requiring duration of startup to be minimized is counterproductive to the goal of minimizing emissions. This rule should be revised to simply require that excess emissions above emission standards should be minimized to the extent practicable during startup and shutdown situations. *(Ford)*	1.07-46. The District will modify the language in sections 3.6.2 and 3.6.3 to reflect the goal of minimizing excess emissions, not solely minimizing the time period over which excess emissions occur.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 3.6.1 Please explain how "process equipment design" and "pollution prevention measures" can be used to reduce emissions during a startup or shutdown that is experiencing excess emissions and in what way this may affect enforceability of this regulation and potential violations. *(GLI, LGE)*	1.07-47. A company would be required to consider and use all reasonable means of reducing emissions if the emissions cannot be prevented. How any potential emission reduction measure would be applicable depends on the particular process or process equipment. In determining the appropriate enforcement action, the District may give consideration to whether there was a reasonable measure that could have been implemented to reduce or eliminate excess emissions but was not used.
1.07 sec. 3.6.2 The District should consider allowing facilities to operate their equipment during startup and shutdown situations in a manner that is both safe to facility personnel and does not cause damage to the equipment (following equipment manufacturer guidelines for example). *(GLI)*	1.07-48. This section would not require the equipment to be operated during a startup or shutdown in a manner that would be unsafe to facility personnel or cause damage to the equipment. If the excess emissions during a startup or shutdown could have been minimized but in doing so would have caused a safety concern, then the owner or operator should note this in the report required by section 3.8.6. This information would be considered by the District in determining the appropriate enforcement action.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 3.7 This proposed requirement seems unnecessary and should be deleted. If a notification was made regarding the startup or shutdown, then a follow-up report will be provided. That report will identify the excess emissions (if any) and additional notification is unwarranted. As some emission data determinations may require additional time to assess whether excess emissions actually occurred, e.g., those emission calculations that must be performed at the end of the month, submitting a report too soon will be unproductive. Therefore, additional time, e.g., 7 days after calculations are performed to determine whether an excessive emission occurred, would be more appropriate. *(Ford)*	1.07-49. The purpose of section 3.7 is for the District to receive a notice that excess emissions did not occur so that no additional District resources are used to follow up on the initial notice. The District considers requiring the negative declaration report by the end of the next working day to be a reasonable time frame.
1.07 secs. 3.7, 3.8, and 4.5 The timelines for initial post-event notifications are unnecessarily short. Providing a meaningful and compliant report to the District may take longer than the next working day. Please change this to five days. *(EID)*	1.07-50. The District notes that the current regulation requires this information to be submitted by the end of the next working day. However, the District agrees that additional time may be needed for a company to develop accurate information. Therefore, the District will change the requirement in sections 3.7, 3.8, and 4.5 to five working days following the end of the startup, shutdown, or malfunction.
1.07 secs. 3.7 and 4.5 It is unproductive for facilities to supply and the District to review reports regarding excess emissions that did not occur. Delete unproductive reporting requirements regarding initial notification and follow-up reports when no excess emissions occurred. *(Borden)*	1.07-51. The District has drafted the requirement to report that no excess emission occurred after initially reporting that an excess emission may occur for the very reason cited by this comment. Receiving a report that no excess emission occurred closes the initial report for the District.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 3.8 Additional time to prepare and submit a written report will likely be necessary and should be granted to generate the emission calculations and confirm whether emission standards were exceeded. Written reports should be provided at least 7 days following the date that emission calculations can be performed. *(Ford)*	1.07-52. In general, starting up and shutting down a process or process equipment is a normal part of the operation of the process or process equipment. Thus, the effect on emissions resulting from a startup or shutdown should, in general, be known by the owner or operator of the process or process equipment. However, the District agrees that additional time may be needed for a company to develop accurate information. Therefore, the District will change the requirement in section 3.8 to five working days following the end of the startup or shutdown.
1.07 Sec. 3.8 This section sets out the information that must be provided in the report at the conclusion of a startup or shutdown that releases excess emissions. The required information should be expanded to include (1) the method of calculating emissions; (2) the amount by which the emissions exceeded regulatory limits; (3) the regulatory limits that apply; (4) calculations to determine if Regs. 5.01 and 5.20-5.23 were violated; (5) the methods used to monitor and the resulting monitoring data collected during the event. The report should be signed and sealed by an independent P.E. registered in Kentucky and a "responsible corporate official." (*EIP, Sierra Club*)	1.07-53. The District considers the "quantity and concentration of excess emissions" to be the same as the amount of the exceedance. However, the District will add the method for calculating excess emissions to section 3.8.5. The District will also add to section 3.8.5 a requirement to identify the applicable emission standard that was exceeded. The enforceable provision of the STAR Program as it relates to industrial sources is an emission standard, not an ambient concentration. Section 3.6.4 requires monitoring that is routinely in place to be continued during excess emissions unless technically infeasible. Routine monitoring data are required to be maintained and could be reviewed by the District if deemed appropriate. A "responsible official," as defined in Regulation 2.16 section 1.35, is required to certify the submitted emissions information. The District considers this sufficient.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 3.8.5 Change "the physical and chemical composition and calculated quantity and concentration" to "the pollutant and calculated quantity, calculated concentration, emissions monitor recording or results of an EPA approved test method" to allow flexibility for the various types of pollutants and emission limits mandated in the regulations and/or the source's permit (such as opacity). *(GLI, LGE)*	1.07-54. The District agrees that it is appropriate to allow equivalent information that relates to compliance with the emissions standard, such as emissions monitoring data or results of an EPA-approved test method, to be used. The District will add this provision to section 3.8.5 and 3.5.5.
1.07 sec. 3.8.7 This is duplicative with current and proposed reporting requirements and should be deleted. This information should be contained in a database created and maintained by the District, not the facilities. *(GLI, LGE)*	1.07-55. The District considers it appropriate to require the companies to keep track of the instances of excess emissions resulting from startups and shutdowns.
1.07 sec. 4 This section requires at least four reports to the District for every malfunction. How will this reduce air toxics? *(FBT)*	1.07-56. Focused attention on excess emissions and the potential for enforcement actions taken for these violations will likely result in increased preventive measures being employed to reduce excess emissions. The District notes, however, that the 15-day (section 4.7) and the 60-day (section 4.8) reports are proposed to be consolidated into one report.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 4 The term "or are likely to occur" should be deleted, otherwise numerous reports will be required if even excess emissions above emission standards do not occur. Notification within one hour should not be required for all situations, especially those that do not pose a public health threat. A tiered approach should be provided. Actions required to be undertaken during a malfunction condition should be consistent with the potential threat that exists. *(Ford)*	1.07-57. The determination that excess emissions resulting from a malfunction are likely to occur is made by the company. If excess emissions did not occur, then the owner or operator would be required to report to the District that excess emissions did not occur. In general, the District considers the time frame to be appropriate. The District will provide additional time for this initial report to the District if a 911 call is made. The owner or operator has a general duty to comply with emission standards at all times.
1.07 sec. 4.1 Change “as promptly as possible, but no later than 1 hour” to “within 1 hour or as soon as possible” to provide flexibility. The 1-hour time frame is too short to thoroughly investigate the malfunction during these labor-intensive situations and could lead to mistakes, confusion and more paperwork. *(Arkema, GLI, LGE)*	1.07.58. The District will change this requirement to add an additional hour for notifying the District if a call to the 911 system was made because of a malfunction.
1.07 Sec. 4.1 This section requires only that the District be notified no later than 1 hour following the start of a malfunction that releases excess emissions. This section should be modified to require that both the District and public be notified of malfunctions. The public could be notified through a community alarm system or an automatic telephone calling system. (*Sierra Club*)	1.07-59. The District disagrees that public notification of a malfunction should be a District responsibility. If the public should be warned of unexpected emissions resulting from a malfunction, then the company would have called the 911 system, which is designed to sound alarms and provide information to an automated telephone information system.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 4.1 The sentence "A call placed to the emergency number 911 constitutes notification to the District" should not be removed from this regulation. During a true emergency, fewer phone calls allow facility personnel to focus on minimizing the impact of the event. *(Arkema, EID, GLI, LGE)*	1.07-60. The District will change this requirement to add an additional hour for notifying the District if a call to the 911 system was made because of a malfunction.
1.07 sec. 4.2 The amount of detail required to be reported is not needed, nor is it likely to be available as soon as the initial notification is being requested. Notice of the malfunction and basic information should be all that is needed for the initial report. A follow-up written report can provide additional information once the cause and impact of the malfunction has been determined and any preventative plans have been evaluated. Typically at least 7 days after the event or emission determination will be needed. *(Ford)*	1.07-61. The District recognizes that some of the information, particularly relating to details of the excess emissions, will be estimated. The time frame for submitting the report required by section 4.7 allows for a more thorough evaluation and determination of any excess emissions.
1.07 sec. 4.2.4 Change as follows: "The date and time of the beginning of the malfunction~~,~~ and the estimated time before~~, consistent with safe operating procedures, input feed to the process or process equipment will be stopped and the process or process equipment shut down or~~ the process or process equipment ~~is~~ can be returned to normal operation~~, whichever is earlier (the excess emissions end),~~ and the estimated time period during which excess emissions are likely to occur." This allows the facility to consider the level and type of excess emissions and the health effects, if any, before being required to plan and submit information for a shutdown. *(GLI, LGE)*	1.07-62. If the company does not intend to shut down the process or process equipment and instead intends to return to normal operation, then the time to return to normal operation is shorter (because stopping the input feed/shutting down the process does not occur). The company may consider whatever it chooses in determining whether to operate with a potential violation.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 4.2.5 Change "the physical and chemical composition and estimated quantity and concentration of excess emission for each air contaminant" to "the pollutant and calculated quantity, calculated concentration, emission monitor recording or results of an EPA-approved test method for each air contaminant with excess emissions" to provide flexibility. *(GLI, LGE)*	1.07-63. The District agrees that it is appropriate to allow equivalent information that relates to compliance with the emissions standard, such as emissions monitoring data or results of an EPA-approved test method, to be used. The District will add this provision to sections 4.2.5 and 4.7.5.
1.07 sec. 4.2.5 The rules should require facilities to estimate the composition and quantity of emissions (with the current permissive language, they may leave it out). *(EIP)*	1.07-64. Section 4.2.5 requires the submittal of information regarding potential excess emissions if this information can reasonably be determined at the time that the malfunction occurs. However, this is case-specific. The report pursuant to section 4.7 requires the submittal of this excess emissions information.
1.07 sec. 4.2.7 Facilities should be able to consider the level and type of excess emissions and the health effects, if any, before being required to plan and submit information for a shutdown. This item should be deleted. *(GLI, LGE)*	1.07-65. The company may consider whatever it chooses in determining whether to operate with a potential violation. This section requires the company to identify, if applicable and known, the outcome of considering whatever the company chose to consider and why it reached the decision not to shut down the process.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 4.3 The reference to 4.2.7 should be deleted along with 4.2.7. Also see Comment to sec. 3.3 (regarding after-hours notification to the District). *(GLI, LGE)*	1.07-66. Section 4.2.7 requires the company to identify, if applicable and known, the outcome of considering whatever the company chose to consider and why it reached the decision not to shut down the process. It is the responsibility of a company to comply with applicable requirements, including emission standards. The decision to shut down a process or process equipment if the emissions are likely to be in violation of an emission standard rests with the company, not the District. If excess emissions do occur, then the District will determine the appropriate enforcement action to take, based upon consideration of the factors included in section 2.3. The purpose of the after-hours report to the District's voice mail system is to allow District staff to retrieve the reported information from a remote location. If the District were to receive an air pollution complaint associated with the excess emissions via the District's after-hours paging system, the District could confirm the cause and extent of the excess emissions without traveling to the District's office to read a notice that was sent via FAX, and determine more quickly an appropriate District response.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 4.4 Not "all" of the requirements listed will necessarily minimize emissions. Consider an oxidizer used to control VOC emissions from a painting operation curing oven. Shutting down the oven would not necessarily reduce any VOC emissions that would be emitted during the malfunction of the oxidizer. Rather, if the vehicles have to be repainted or scrapped, more VOC emissions will be generated. Thus, requiring the shutting down of the process or process equipment could yield higher total emissions and impact to the environment. This rule should be revised to simply require that excess emissions above emission standards should be minimized to the extent practicable during malfunction situations. *(Ford)*	1.07-67. Section 4.7.6 requires the report to include an explanation as to how the provisions of section 4.4 were met. A discussion of the actions taken and the total amount of excess emissions resulting from those actions would be appropriate as part of this explanation. The District will remove the word “All” from section 4.4.1 (and the similar wording in section 3.6.1), although the District notes that the requirement in section 4.4.1 is to eliminate or minimize excess emissions resulting from a malfunction.
1.07 sec. 4.4.1 Please explain how “process equipment design” and “pollution prevention measures” can be used to reduce emissions during a malfunction that is experiencing excess emissions and in what way this may affect enforceability of this regulation and potential violations. *(GLI, LGE)*	1.07-68. A company would be required to consider and use all reasonable means of reducing emissions if they cannot be prevented. How and whether any potential emission reduction measure would be applicable depends on the particular process or process equipment. In making the determination of the appropriate enforcement action, the District may give consideration to whether there was a reasonable measure that could have been implemented to reduce or eliminate excess emissions but was not used. Process equipment design, especially, and to some extent, pollution prevention measures, would not be expected to be implemented during a malfunction; consideration of these is appropriate for planning and implementing measures that could eliminate or reduce future excess emissions.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 4.4.1 Facilities should be able to consider the level and type of excess emissions and the health effects, if any, before being required to plan and submit information for a shutdown. *(GLI, LGE)*	1.07-69. The company may consider whatever it chooses in determining whether to operate with a potential violation. This section requires the company to identify, if applicable and known, the outcome of considering whatever the company chose to consider and why it reached the decision not to shut down the process.
1.07 sec. 4.4.1 Facilities should be allowed to consider operating their equipment during malfunction situations in a manner that is both safe to facility personnel and does not cause damage to the equipment. *(GLI, LGE)*	1.07-70. Protection of facility personnel and not damaging the equipment would be considered within the meaning of "consistent with safe operating procedures," as specified in section 4.4.1.
1.07 sec. 4.6 Change "No later than 1 hour after the excess emissions ended, the owner or operator..." to "Within 1 hour <u>or as soon as possible</u> after the excess emissions ended, the owner or operator..." This allows more flexibility for facilities to gather quality information that can be provided to the District in a timely manner. See Comment to sec. 4.1. *(GLI, LGE)* Notification within an hour after a malfunction has ended is onerous and unnecessary to protect public health. This section should be deleted. *(Ford)*	1.07-71. The District considers the information required in this notice to be minimal, the substantive new information being the time that the excess emissions ended. However, the District will revise this requirement to be as soon as reasonably possible but no later than two hours. The District notes that a detailed report on the excess emissions is not required until 15 calendar days after the excess emissions ended.
1.07 sec. 4.6 A more definitive timeline should be made in this section. The "end of that day" could be just a few minutes if an event takes place in the late night hours. *(EID)*	1.07-72. In recognition that the time allotted by the phrase "by the end of that day" depends upon when during the day the excess emissions ended, the District will revise this phrase to provide a fixed 4 hours for written verification of a telephone notification.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 4.7 This section sets out the information that must be provided in the report filed no later than 15 calendar days after the excess emissions from a malfunction ended. The required information should be expanded to include (1) the method of calculating emissions; (2) the amount by which the emissions exceeded regulatory limits; (3) the regulatory limits that apply; (4) calculations to determine if Regs. 5.01 and 5.20-5.23 were violated; (5) the methods used to monitor and the resulting monitoring data collected during the event. The report should be signed and sealed by an independent P.E. registered in Kentucky and a "responsible corporate official." (*EIP, Sierra Club*)	1.07-73. The District will add the method for calculating excess emissions to section 4.7.5. The District considers the "quantity and concentration of excess emissions" to be the same as the amount of the exceedance. The District will also add to section 4.7.5 a requirement to identify the applicable emission standard that was exceeded. The enforceable provision of the STAR Program as it relates to industrial sources is an emission standard, not an ambient concentration. Section 4.4.4 requires monitoring that is routinely in place to be continued during excess emissions unless technically infeasible. Routine monitoring data are required to be maintained and could be reviewed by the District if deemed appropriate. A "responsible official," as defined in Regulation 2.16 section 1.35, is required to certify the submitted emissions information. The District considers this sufficient.
1.07 secs. 4.7, 4.7.3, 4.7.4 and 4.7.5 These should be deleted as they are duplicative of information required earlier in the notification process (see secs. 4.2 and 4.6). *(GLI, LGE)*	1.07-74. The purpose of the report in section 4.7 is to confirm the information that was submitted in the initial report and to obtain more accurate information that results from a more thorough evaluation of the malfunction. In addition to confirming the information relating to the process and process equipment involved in a malfunction and the actual dates and times of the malfunction, resubmitting the information allows the District to associate this report with the initial report.

Section ... Comment ... From	Comment No. District Response
1.07 secs. 4.7 and 4.8 These can be incorporated into sec. 4.8 to eliminate the need for the 15-day notification (all of sec. 4.7). *(GLI, LGE)* The sixty day deadline for malfunction reports to be submitted following excessive emissions is too lengthy a time period between the excess emission event and the report submittal. Since the report requires information on the cause of the malfunction, steps that will be taken to prevent similar occurrences and the frequency of excess emissions from malfunctions during the previous 2 years, the report should be required to be submitted no later than 20 to 30 days after the excess emissions ended. *(REACT)* Providing two follow-up reports is burdensome and unnecessary. A single report should be all that is required. Such report should provide a summary of the malfunction, actions taken and future preventative actions. Additional information is not necessary and should not be required. *(Ford)*	1.07-75. The District considers the 15-day time frame appropriate for the information specified in section 4.7. The analysis and future plans required in section 4.8.1 may reasonably take longer to undertake, thus the proposed 60-day time frame. However, the District agrees that most of the information specified in sections 4.7 and 4.8 is consistent with the suggested content of a single report. The District will propose to combine both of these reports into one report, due within the 15-day time frame of section 4.7, but would recognize that the information required by section 4.8.1, which may require a detailed engineering analysis, may take the full 60 days as originally proposed, and thus would allow for a 45-day extension for submittal of the information required by section 4.8.1. The District considers it reasonable to require the company to track instances of excess emissions.

Section ... Comment ... From	Comment No. District Response
1.07 sec. 4.8 The 60-day reporting requirement should only be required for instances where malfunctions "are of a repetitive nature, or when more than 12 failures of the same or similar pieces of equipment occur in a 12-month period," not for every isolated malfunction. As written, this section creates a huge paperwork burden for facilities and the District and from a practical standpoint does not reduce emissions. Therefore, the entire sec. 4.8 should be eliminated. Instead, language from existing sec. 4.2 should be retained, thus allowing the District to pursue corrections from those facilities that are potentially negligent in their operations. *(GLI, LGE)*	1.07-76. The District does not consider allowing up to 11 failures in a 12-month period without a required analysis and preventive plan to be acceptable. In fact, the EPA's startup, shutdown, and malfunction policy specifically states that repetitive malfunctions should not be considered unexpected. The District considers the requirements of section 4.8 appropriate.
1.07 sec. 4.8 This section sets out the information that must be provided in a follow up report no later than 60 days after the excess emissions cease. This section should explicitly require that this information include sufficient process data, supported by operating logs, to explain the root cause of the accident. The report should be signed and sealed by an independent P.E. registered in Kentucky and a "responsible corporate official." (*Sierra Club*)	1.07-77. The District has general authority to require the submittal of additional information, and has specifically stated this in section 4.7.7. The additional information identified in this comment may not be needed to establish the cause of a malfunction or the appropriate steps to prevent or minimize similar occurrences in the future. A "responsible official," as defined in Regulation 2.16 section 1.35, is required to certify the submitted report. The District considers this sufficient.
1.07 sec. 4.8.2 This is duplicative with current and proposed reporting requirements and should be deleted. This information should be contained in a database created and maintained by the District, not the facilities. *(GLI, LGE)*	1.07-78. The District considers it appropriate to require the companies to keep track of instances of excess emissions resulting from startups and shutdowns. This is one of the factors the District will consider in making a determination pursuant to Regulation 1.20 that a malfunction prevention program should be required.

Section ... Comment ... From	Comment No. District Response
1.07 Sec. 5 This section allows a facility to obtain a Board Order to allow it to operate with excess emissions for malfunctions exceeding 30 days. This section should be modified to require that facilities that exceed their emission standards or EALs for more than 8 hours be shut down until the malfunction is corrected, unless it is demonstrated to the District, subject to public review, that the excess emissions do not exceed the EALs in Reg. 5.21 and NAAQS in Reg. 3.01. (*Sierra Club*)	1.07-79. The administrative procedures for Board Orders require a public hearing, thus an opportunity for public review. In reviewing the acceptability of allowing prolonged excess emissions, the environmental impacts could be considered. The enforceable provision of the STAR Program as it relates to industrial sources is an emission standard, not an ambient concentration.
1.07 sec. 5.1 The "engineering review and analysis of the cause of the excess emissions and design of modifications to effect compliance with the emission standards" should be the responsibility of the facility, not the District. This needs to be made clearer. *(GLI, LGE)*	1.07-80. The District agrees that this is the responsibility of the owner or operator, who is required to include a time schedule and identify the corrective actions to be taken, including, if needed, the time necessary for this engineering review and analysis. The language in the second sentence of section 5.1 will be revised to clarify this responsibility.
1.07 sec. 5.1 Clarify that this provision does not authorize a source to continue to operate in violation of its emission limits. *(EIP)*	1.07-81. A Board Order would in effect authorize continued operation, but these excess emissions are a continued violation and an appropriate penalty may be assessed.
1.07 sec. 5.2 The reference to the "appropriate penalty for the excess emissions" should be deleted. Not all excess emissions are subject to a penalty. References to penalties should all be in the enforcement section of the regulations. *(LGE)*	1.07-82. The District will remove the last phrase in section 5.2, but notes that, pursuant to section 2.2, an excess emission is a violation of the applicable emission standard and thus is subject to an appropriate enforcement action, including a penalty.

Section ... Comment ... From	Comment No. District Response
1.20 General Comment – de minimis exemption There is a concern that the malfunction prevention program can become applicable to any facility having even a minimal number of malfunctions (no de minimis levels defined). *(GLI)*	1.20-1. The key factor in the District making a determination that a malfunction prevention program is appropriate is not necessarily the number of malfunctions that have or may have occurred but the significance of a malfunction to the protection of public health and welfare.
1.20 General Comment The malfunction prevention program document will require continued upkeep since it appears to be a long-term document. *(GLI)*	1.20-2. The District considers that a company has a continued obligation to evaluate its processes and process equipment and improve, as appropriate, the company's efforts to minimize instances of excess emissions. This may become even more important as equipment ages and the likelihood of this older equipment experiencing a malfunction increases. However, the District recognizes that a company may establish a history of successfully minimizing malfunctions and will add a provision that will allow the District to discontinue applicability of this regulation for an affected facility.
1.20 General Comment The development of a malfunction prevention program should be a requirement for all major sources of both criteria and toxic air pollutants. Limiting the responsibility for development of such a program to those sources that have already reported a malfunction after the implementation of Reg 1.07, provides facilities with a "free bite" that does not encourage better management of plant equipment and processes. The burden should not be placed on the District to justify the imposition of a malfunction prevention program – instead, it should be an integral component of proper facility management. (*KRC*)	1.20-3. The likelihood of a malfunction of equipment resulting in excess emissions varies with the specific process and process equipment. Some process equipment may fail but not result in excess emissions, while the failure of some equipment, such as control equipment, to operate normally would likely result in excess emissions. The District considers that the requirement of a malfunction prevention program should selectively focus on the processes and process equipment that have, or may have, a history of malfunctions or for which a failure would likely result in excess emissions and have a higher likelihood of becoming harmful to public health or welfare.

Section ... Comment ... From	Comment No. District Response
1.20 General Comment Please provide the RIA information for this regulation. *(KPC)*	1.20-4. The RIA will be developed and made available as required by Regulation 1.08.
1.20 sec. 1 More definitive criteria or the methodology by which the District will determine what is an "affected facility" should be included in the regulation, rather than leaving it entirely to the District's discretion. *(Borden, EID, GLI, LGE)*	1.20-5. The District considers that the requirement of a malfunction prevention program should selectively focus on the processes and process equipment that have, or may have, a history of malfunctions or for which a failure would likely result in excess emissions and have a higher likelihood of becoming harmful to public health or welfare.
1.20 sec. 1 "Affected facility" should be expanded to include all Group 1 and Group 2 stationary sources. *(ALA)*	1.20-6. The likelihood of a malfunction of equipment resulting in excess emissions varies with the specific process and process equipment. Some process equipment may fail but not result in excess emissions, while the failure of some equipment, such as control equipment, to operate normally would likely result in excess emissions. The District considers that the requirement of a malfunction prevention program should selectively focus on the processes and process equipment that have, or may have, a history of malfunctions or for which a failure would likely result in excess emissions and have a higher likelihood of becoming harmful to public health or welfare. This could also apply to a process or process equipment located at a minor source.

Section ... Comment ... From	Comment No. District Response
1.20 sec. 1.1.1 The occurrence of limited and isolated malfunctions should not cause a facility to have to develop a malfunction prevention program. Facilities that experience malfunctions "of a repetitive nature, or when more than 12 failures of the same of similar pieces of equipment occur in a 12-month period" (from existing language in Reg. 1.07 sec. 4.2), or some other metric or benchmark, would be more appropriate candidates. *(EID, GLI, LGE)*	1.20-7. The District considers that the requirement of a malfunction prevention program should selectively focus on the processes and process equipment that have, or may have, a history of malfunctions or for which a failure would likely result in excess emissions and have a higher likelihood of becoming harmful to public health or welfare. In particular, the District considers that allowing up to 11 failures in a 12-month period without a required analysis and prevention plan is not acceptable.
1.20 sec. 1.1.2 A malfunction prevention program should not be required for unverified malfunctions (where a malfunction "may have occurred"). This section should be deleted. *(GLI, LGE)*	1.20-8. The District will be obtaining additional monitoring equipment and may identify an unexpected high concentration of a particular TAC where no malfunction was reported by the company. The District considers it appropriate to retain this section.
1.20 sec. 1.1.3 Please explain how "a malfunction that may become harmful to public health or welfare" will be determined. *(GLI, LGE)*	1.20-9. Based upon the level of uncontrolled emissions of a specific TAC from a process or process equipment, a malfunction may result in emissions that could become harmful to public health or welfare. The purpose of the District's authority to require a malfunction prevention program for such a process or process equipment is to minimize the likelihood that such a malfunction would occur.

Section ... Comment ... From	Comment No. District Response
1.20 sec. 1.1.3 The definition of "affected facility" should be revised to require a Malfunction Prevention Program if the emissions from any facility could potentially exceed the EALs in Reg. 5.21, based on worst-case potential emissions. (*Sierra Club*)	1.20-10. The District considers that the requirement of a malfunction prevention program should selectively focus on the processes and process equipment that have, or may have, a history of malfunctions or for which a failure would likely result in excess emissions and have a higher likelihood of becoming harmful to public health or welfare. The comment addresses an issue that would be considered by the District, but would not be the only factor considered by the District in determining whether a program should be required.
1.20 sec. 2 The applicability of this regulation should be limited to process equipment that has sustained repetitious malfunctions. As written, one troublesome piece of equipment triggers the development of a malfunction prevention program for the entire facility. *(GLI, LGE)*	1.20-11. The term "affected facility" is defined in section 1.1 as a process or process equipment that meets one of the listed criteria. A determination by the District to require a malfunction prevention program for that specific process or process equipment would not trigger this requirement for all processes and process equipment at the stationary source. The District is revising its regulations to use the term "stationary source" when the entire company site is intended and define "affected facility" in each regulation to identify the specific processes and process equipment intended to be regulated.

Section ... Comment ... From	Comment No. District Response
1.20 sec. 3.1 "if appropriate" should be better defined. (*EPA)*	1.20-12. The intent of the phrase "if appropriate" is to require consideration of whether the malfunction prevention program is current, relevant, and effective as written. If the program has been successful in preventing malfunctions and no improved methods are available, then updating of the program would not be needed. The District notes that this phrase will be removed, but the requirement to update will remain, based upon a determination by either the owner or operator or the District that an update is necessary to keep the program current, relevant, and effective.
1.20 sec. 3.1 Please explain how long the program will be in effect. This section indicates that the plan will be updated at least every 5 years, which indicates a long term commitment. Some corrections could take considerably less than 5 years to implement. Will a shorter commitment term be allowed for a malfunction prevention program? *(GLI, LGE)*	1.20-13. The focus of a malfunction prevention program is routine inspection, maintenance, and repair of equipment, not a one-time fix. However, the District considers it appropriate to allow the discontinuation of a required malfunction prevention program based upon a supporting history that the program has been successful in minimizing malfunctions. The District will add a provision allowing the District to approve ending the requirement of a malfunction prevention program.
1.20 sec. 3.1 It is not clear whether the program has to be reviewed at least every five years, or if the District can determine that a less frequent review is sufficient. *(EIP)*	1.20-14. The District will remove the requirement that a malfunction prevention program be reviewed and updated at least every five years and reword this provision to require that the program be updated as the owner or operator or the District determines necessary to keep the program current, relevant, and effective.

Section ... Comment ... From	Comment No. District Response
1.20 sec. 3.1.6 This item should be changed to a general statement in the program that the facility will "implement corrective procedures in the event of a malfunction or failure resulting in excess emissions" instead of requiring specifics that may or may not cover every situation and could change often. *(GLI, LGE)*	1.20-15. The intent of this provision is to require the owner or operator to anticipate likely malfunctions and equipment failures that would result in increased emissions and develop beforehand an action plan to address the situation. It is understood that every possible situation cannot be anticipated. If circumstances change and a developed plan is no longer appropriate, then the program should be updated so that it is current, relevant, and effective.
1.20 sec. 3.1.6 Malfunctions should only be related to failures that result in emission of air contaminants above permitted emission limitations and not above "normal" levels. "Normal levels" is not a recognized standard and should not be used. *(GLI, LGE)*	1.20-16. The District will end section 3.1.6 with the word "malfunction" and remove the phrase that applied to the increase of an emission above a normal level.
1.20 sec. 3.1.7 The time between calibrations should not contradict or conflict with already existing regulatory calibration requirements such as those in 40 CFR Part 75. *(GLI, LGE)*	1.20-17. Section 116 of the Clean Air Act specifically grants authority to state and local air pollution control programs to establish requirements that are more stringent than the federal requirements. A local requirement does not prohibit compliance with a less stringent schedule.
1.20 sec. 3.1.8 It is not clear whether the source is required to install the additional air control equipment or instrumentation identified as appropriate to minimize the occurrence of a malfunction. *(EIP)*	1.20-18. Section 3.3 requires the owner or operator to implement the malfunction prevention program upon approval by the District. Implementation would include the installation and operation of the equipment identified pursuant to section 3.1.8. The District will revise this language to clarify that the identified additional equipment will be installed.

Section ... Comment ... From	Comment No. District Response
1.20 secs. 3.1.9 and 3.1.10 Please explain the meaning of these items. *(GLI, LGE)*	1.20-19. Section 3.1.9 recognizes the possibility that the owner or operator may not be able to implement a component of a malfunction prevention program immediately upon approval by the District and allows the program to include an implementation schedule. Section 3.1.10 provides the District with the authority to require a malfunction prevention program to contain additional provisions deemed appropriate by the District to protect public health and welfare, taking into consideration the unique circumstances of a particular process or process equipment.
1.20 sec. 3.2 The 120 day and 60 day requirements should be from the time the facility receives notification from the District. *(GLI, LGE)*	1.20-20. The District will change section 3.2 to start the 120-day and 60-day time frames upon receipt of written notification from the District.
1.20 sec. 3.2 The 120 day deadline is too lengthy for the submittal of a malfunction prevention program. It should be shortened to 60 days. Furthermore, the 60 day deadline is also too lengthy for the submittal of revisions addressing the deficiencies. It should be shortened to 30 days. *(REACT)*	1.20-21. The District considered both longer and shorter time frames for development of and revisions to a malfunction prevention program. Some items could require an engineering analysis to determine the feasibility and safety of equipment changes. The District considers the drafted time frames to be the shortest that would allow for consideration and development of, and changes to, the program.

Section ... Comment ... From	Comment No. District Response
1.20 sec. 3.3 The facility should have at least 60 days or other sufficient notice after receiving notification from the District to implement the malfunction prevention program. (Explanation) *(EID, GLI, LGE)*	1.20.22. Section 3.1.9 provides the owner or operator the opportunity and flexibility to identify the components of the malfunction prevention program that could not reasonably be implemented upon District approval, and includes the requirement of an implementation schedule for these components.
1.20 sec. 3.3 It is not clear into which type of air permit the program gets incorporated. It is also not clear what the public participation process is for permit revision. *(EIP)*	1.20-23. The applicable permit would be whatever construction or operating permit is in force for the affected process or process equipment. The District will add a requirement of an opportunity for public review and comment on an initial malfunction prevention program and on a substantive change to a program.
1.20 sec. 3.4 Although a malfunction prevention program might be an applicable requirement of the facility's permit (as a District-only requirement), it must not be made part of the Title V or FEDOOP permit as text or as an off-permit document. Doing so would severely limit the facility's ability to change or upgrade the program as provided in this section. *(EID, GLI, LGE)*	1.20-24. The District agrees that federally required permit procedures should not limit a company's ability to make appropriate changes to an approved malfunction prevention program. Although Regulation 1.07 is in the State Implementation Plan (SIP), the District is not required to include Regulation 1.20 in the SIP. If Regulation 1.20 is not in the SIP, then the malfunction prevention programs required by this regulations would not become federally enforceable and the District can determine how changes are made to the District-only enforceable parts of a permit.

Section ... Comment ... From	Comment No. District Response
1.20 sec. 3.4 The provision states that the owner of a facility may periodically revise the Malfunction Prevention program as necessary. When would it be necessary, and is this expected to be a requirement rather than a recommendation? If it is a requirement, then the term *may* should be made more definite. (*EPA*)	1.20-25. Section 3.1 contains the requirement to review and, as determined necessary by either the owner or operator or the District, update a malfunction prevention program. Section 3.2 contains the requirement to revise a program if the District determines that a revision is necessary. Section 3.4 is intended to be permissive, allowing the company to initiate a change to the program outside of the required update pursuant to section 3.1 or revision required by section 3.2. The District will revise the language in section 3.4 to differentiate between the required changes pursuant to sections 3.1 and 3.2 and the permissive changes initiated by the owner or operator pursuant to section 3.4.
1.20 sec. 3.5 To avoid repeated changes to it, the malfunction prevention program should only reference existing facility documents (such as a CEM QA/QC Plan or SOP) rather than incorporating them directly. *(GLI, LGE, Noveon)*	1.20-26. The District agrees that the wording of this requirement may specify that these other documents, in whole or in part, may be "referenced" in the malfunction prevention program rather than "included." The District notes, however, that a copy of the current document that is referenced in the program must be sent to the District.
1.20 sec. 3.5 Including an occupational health plan in the malfunction prevention program is inappropriate for this regulation and not necessary to remedy the chemicals of concern. The District does not have delegated authority to implement OSHA requirements and cannot require inconsistent plans. *(GLI, LGE)*	1.20-27. The intent of section 3.5 is to allow a company to use all or a portion of a plan that is already developed to meet some or all of the requirements of this regulation. This is not a requirement and would be done only if the owner or operator proposed to use such plan in the malfunction prevention program. The District will modify the language in section 3.5 to clarify that the owner or operator has the discretion to reference one of these documents.

Section ... Comment ... From	Comment No. District Response
1.20 sec. 3.6 See recommendations for 1.06 sec. 3.7 concerning retention of records, documents and data. Records required by this section should be available to the public. *(REACT)*	1.20-28. The five-year retention period is required by the Title V regulations. The District considers this time period to be adequate for enforcement purposes. All records submitted to the District are subject to inspection under the state open records law and District Regulation 1.08, with the caveat that these requirements exempt confidential business information from inspection.

Section ... Comment ... From	Comment No. District Response
1.21 General Comment – Applicability What is the justification for requiring this at any source? At minor sources? *(Arkema, Borden)*	1.21-1. In a follow-up study to the Texas Air Quality Study (TexAQS 2000) for the Houston area, the Texas Natural Resources Conservation Commission (TNRCC) has documented that leaks can comprise a significant portion of the actual emissions of a chemical plant. *Measurement and Assessment of Equipment Leak Fugitives in Industrial Ethylene and Other Chemical Sources*, Environ International Corporation, June 2003. The potential for increased emissions that may become harmful to public health or welfare is related to the specific process unit, not whether the process unit is located at a major source.
1.21 General Comment – Applicability Enhanced leak detection should apply only to major HAP and VOC sources. *(Borden)*	1.21-2. Most of the 40 CFR Parts 60, 61, and 63 leak detection and repair (LDAR) programs apply to major sources. Therefore, a process unit that is defined as an affected facility pursuant to section 1.1.1 is likely to be located at a major stationary source. However, section 1.1.2 includes any process unit for which the District determines that a program is appropriate. This could include process units that are not located at a major source. The potential for increased emissions that may become harmful to public health or welfare is related to the specific process unit, not whether the process unit is located at a major source.

Section ... Comment ... From	Comment No. District Response
1.21 General Comment - Applicability The exemption for R&D facilities and bench-scale processes from 40 CFR 63.160(f) should be applied to Regulation 1.21 in total. *(GLI)*	1.21-3. If a facility or process, such as an R&D facility or bench-scale process, is exempted from an LDAR program of a 40 CFR Part 63 MACT standard, then that facility or process would not be defined as an "affected facility" pursuant to section 1.1.1. The only other way for a facility or process to be defined as an "affected facility," and thus subject to the requirements of Regulation 1.21, is for the District to make the determination pursuant to section 1.1.2.
1.21 General Comment 40 CFR Part 60, 61 and 63 LDAR requirements are not identical. The various federal leak detection programs have been developed over the years to address particular industries. (Examples) Imposing HON LDAR on non-HON sources is confusing and has little value. *(GLI)*	1.21-4. The District considers, for the purpose of an enhanced LDAR program, that the HON LDAR program is a reasonable base program for processes subject to a federal LDAR program. Using the HON LDAR program as a base program will require more monitoring than would be required by some of the other LDAR programs. This increased monitoring will result in decreased emissions. See the "streamlining" comment below.
1.21 General Comment – multiple LDARs By law, companies have to comply with the federal LDAR program they fall under. Under the proposed system companies will need to maintain two separate sets of books and do two separate reports, one for the federal LDAR program and one for the District program, since they will not be the same. Adding a second LDAR program on top of the required program is confusing and likely to lead to non-compliance brought about by interpretation difficulties while applying two similar, but not identical, programs. *(GLI, KPC, OxyVinyls)*	1.21-5. While a company could choose to comply with two different LDAR programs separately, the District would recommend that the company work with the District to develop one streamlined set of requirements that would encompass the requirements of both programs. This is referred to as "streamlining" and is described in EPA's *White Paper 2* relating to the Title V program. When approved by the EPA, compliance with the streamlined requirements would be deemed compliance with the underlying requirements.

Section ... Comment ... From	Comment No. District Response
1.21 General Comment – multiple LDARs The District does not have authority to replace existing LDAR programs with one it chooses. *(OxyVinyls)*	1.21-6. The District does not have the authority to replace a federal requirement with a less stringent requirement. However, the enhanced LDAR program in draft Regulation 1.21 is equal to or more stringent than the federal LDAR requirements. Section 116 of the Clean Air Act specifically grants authority to state and local air pollution control programs to establish requirements that are more stringent than the federal requirements.
1.21 General Comment – multiple LDARs The District should recognize equivalency for any source complying with LDAR programs equivalent to EPA's HON (40 CFR 63 Subpart H) or 40 CFR 63 Subpart UU, 40 CFR 65 Subpart F, or RCRA's 40 CFR 264/265 Subpart BB LDAR programs. *(Arkema)*	1.21-7. The purpose of draft Regulation 1.21 is to enhance the requirements to which these process units are currently subject. If the District were to recognize equivalency for a process unit complying with the applicable federal LDAR program, then there would be no purpose for Regulation 1.21.
1.21 General Comment An enhanced LDAR program should mimic the federal MACT LDAR standards to the greatest extent possible for consistency in complying with monitoring and reporting requirements. *(EID)*	1.21-8. The purpose of draft Regulation 1.21 is to enhance the requirements to which these process units are currently subject.
1.21 General Comment Compliance is more likely to be achieved by simply lowering the leak definitions within the existing applicable federal LDAR programs. Then, monitoring and work practices would meet both the federal requirements and the new STAR requirements without complicated reconciliation of the requirements and monitoring results. *(GLI)*	1.21-9. The District has added enhancements beyond just lowering the leak definitions. For example, the District has included more frequent monitoring, an accelerated schedule for repairs, the requirement to monitor additional components, and the requirement for an independent third-party audit.

Section ... Comment ... From	Comment No. District Response
1.21 General Comment The chemical applicability has not been adequately defined. The terms "organic compound" and "volatile organic compound" are used interchangeably. If the intent is to ratchet down the existing LDAR program, then it should specifically state the applicability is the same as the Part 60, 61 or 63 applicability: the same regulated substance, the same minimum percentage composition, same minimum hours of service exclusion, etc. *(GLI)*	1.21-10. The District's intent is to use the term "organic compound" consistently throughout this regulation. The term "volatile organic compound" in reference to a VOC-water separator as a component to be monitored quarterly pursuant to section 3.1 is intended to be referred to as an organic compound-water separator. This change will be made. The term "volatile organic compound" is used routinely to reference organic compounds that are precursors to the formation of ozone and, as defined in Regulation 1.02, exempts many compounds that do not contribute significantly to ozone formation, but may become harmful to public health or welfare. The purpose of draft Regulation 1.21 is to enhance the requirements to which these process units are currently subject.
1.21 General Comment Add a mechanism that allows for the leak concentrations to be reduced if the leak concentrations cited in the proposed regulations lead to the exceedance of the health risk goals. *(REACT)*	1.21-11. If, after implementation of the STAR Program components, the District determines that there remain unacceptable concentrations of certain TACs and these unacceptable concentrations are directly attributable to leaks from process units subject to Regulation 1.21, then the District will evaluate whether more stringent LDAR requirements are appropriate, and, if so, undertake new rulemaking.
1.21 sec. 1 Definitions are needed for "process drain," "junction box vent," "screening concentration," and "reworked piping." *(GLI)*	1.21-12. The District considers that the common usage of these terms in the industry adequately defines these terms.

Section ... Comment ... From	Comment No. District Response
1.21 General Comment The exemption in 40 CFR 63.167(e) for open-ended valves or lines containing materials "which would autocatalytically polymerize, or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system" is critical. *(DDE)*	1.21-13. The District has not included a provision in this regulation that would alter the exemption in 40 CFR 63.167(e).
1.21 sec. 1.1 Facilities that demonstrate compliance with 5.21, EA for TACs, should not be subject to this regulation, and the definition of "affected facility" should be changed to reflect that. *(Borden)*	1.21-14. Regulation 5.21 is based on allowed emissions. While a certain rate of emissions attributed to leaks may be included in the allowed emissions of a process unit, the occurrence of a higher level of leaks or more significant leaks would increase the emissions beyond the level that is expected, and thus might exceed the environmental acceptability levels in Regulation 5.21. The purpose of an LDAR program is to minimize these unexpected emissions from leaks.
1.21 sec 1.1.1 By definition, applicability of the enhanced LDAR program is based on process units that use raw materials to manufacture an intended product. In this section, the rule also exempts Dry Cleaning Facilities that are subject to 40 CFR 63 Subpart M from applicability. Since dry cleaners don't use raw materials to manufacture a product and would therefore, by definition, not be subject to the rule, the purpose of the exemption in §1.1.1 is not clear. (*EPA*)	1.21-15. A process unit becomes an affected facility pursuant to section 1.1.1 by being subject to a 40 CFR Part 60, 61, or 63 LDAR program. Not all of these federal regulations are premised on the use of a raw material to manufacture an intended project. The example cited, perchloroethylene dry cleaner, is subject to 40 CFR Part 63 Subpart M if perchloroethylene is used as a dry cleaning solvent.

Section ... Comment ... From	Comment No. District Response
1.21 sec. 1.1.1 Sources that are already subject to a MACT standard for which a compliance date is in the future should be subject to these requirements on the same schedule as the MACT standards – 40 CFR Parts 60, 61 and 63. *(EID)*	1.21-16. Section 13 will be revised to allow the owner or operator of an affected facility to include a compliance schedule for different components of the LDAR plan if that component cannot be implemented immediately upon District approval. The owner or operator could include the compliance date for implementation of a future-applicable MACT LDAR program. However, the District would have the discretion to require implementation sooner than the federal standard if earlier implementation is reasonable.
1.21 sec. 1.1.1 Why are other source categories not identified for exemption, such as sterilizers and degreasers (40 CFR Part 63 Subparts O and T)? (*EPA*)	1.21-17. Unlike subpart M for perchloroethylene dry cleaners, the District does not consider that these MACT standards, subpart O for sterilizers and subpart T for degreasers, contain a formal LDAR program. However, if the District determined that one or all sterilizers or degreasers met the requirements of section 1.1.2 to be included, the District would require an LDAR program.
1.21 sec. 1.3 The definition of "independent third party" is confusing. Change the last phrase to read: "...then the independent third party shall not be the contractor conducting the routine monitoring nor shall it have any association (ownership or financial interest) in the routine monitoring contractor." *(Borden)*	1.21-18. The District does not consider the suggested language to make a substantial change to this definition.

Section ... Comment ... From	Comment No. District Response
1.21 sec. 1.4 The leak definitions are arbitrary and represent values that are 75% to 80% below the Phase III leak definitions under 40 CFR Part 63 Subpart H. They also do not reflect the federal rules' recognition that pumps in different services may have different leak definitions for valid reasons. *(DDE)*	1.21-19. Based upon review of the records of components subject to the federal LDAR programs, the District considers the more stringent leak levels to be reasonable action levels. The District does not consider it necessary to provide the differing leak definitions for pumps in different services as are included in 40 CFR Part 63 Subpart H.
1.21 sec. 1.4.5 Leak concentrations are to be measured by a meter calibrated on methane. Some of the LDAR regulations allow n-hexane and all allow a different substance if methane (or n-hexane) doesn't produce an adequate calibration precision for the instrument, relative to the substance being monitored. This option is needed. *(GLI)*	1.21-20. The District agrees that the option for using a different calibration gas, as is included in 40 CFR 63.180(b)(4)(ii), should be allowed. The District will add (to section 9.2) a provision that allows the use of a different calibration gas, but requires the owner or operator to demonstrate, to the District's satisfaction, equivalency with the leak definition concentration based upon the different calibration gas.
1.21 sec. 3 The District has added several subclasses of equipment that are already covered in the various LDAR programs. (Examples) *(GLI)*	1.21-21. Most of the components that are added in Section 3 are not subject to the existing federal LDAR programs. For those components that are included in a federal LDAR program, the draft requirements are more stringent than the corresponding federal requirements.
1.21 sec. 3 There is no distinction made for service for all components – i.e., light liquid service, gas/vapor service or heavy liquid service. This should be made consistent with the MACT LDAR programs. *(GLI)*	1.21-22. The District disagrees that a distinction should be made. The leak definitions in 40 CFR 63 Subpart H that differentiated between the material in a component had different schedules for meeting the final leak rate but the final leak rate was the same.

Section ... Comment ... From	Comment No. District Response
1.21 secs. 3.1 and 3.2 If connectors, agitators, and/or sampling connection systems are already covered in a federal LDAR program, they should not be included in sec. 3.1 or in the accounting of leakers in sec. 3.2. Including these equipment types in both the federal leak calculation and the District leak calculation is confusing and misleading. *(GLI, OxyVinyls)*	1.21-23. The purpose of Regulation 1.21 is to enhance the existing federal LDAR requirements. While a company could choose to comply with two different LDAR programs separately, the District would recommend that the company work with the District to develop one streamlined set of requirements that would encompass the requirements of both programs.
1.21 sec. 3.7 If a company is able to manage 25,000 LDAR components in an existing paper system, they should be allowed to continue to do so. *(GLI)*	1.21-24. The District considers this requirement reasonable. Having data for this many components in an electronic format would allow for data management and auditing to be more manageable. It is the District's understanding that the companies with existing LDAR programs that have more than 25,000 components are already using a computerized data system. However, the District will add a provision that will temporarily allow data to be recorded in a non-electronic format and later entered into the electronic database if the electronic recording device malfunctions.
1.21 sec. 3.8 What are the criteria for requiring more frequent monitoring? *(GLI)*	1.21-25. The District would make this determination if, based upon the specific circumstances, such requirement is deemed appropriate.
1.21 sec. 3.8 (2nd one) This should be 3.9. We support this option. *(Noveon)*	1.21-26. The District will correct the numbering of this section.

Section ... Comment ... From	Comment No. District Response
1.21 sec. 4 A leak that has been reduced from >10,000 ppm to <10,000 ppm (although not stopped yet) through extraordinary efforts should revert from "fast track" to "regular" repair schedule. *(GLI)*	1.21.27. The District does not consider it adequate to make a partial, but not complete, repair of a significant leak. Once a significant leak is identified, steps should be taken to make a complete repair. A significant leak that receives only a partial repair may degrade again to the level of a significant leak.
1.21 sec. 4.1 A first attempt to repair is not always possible within one business day of detecting a leak (may have to construct scaffolding, employ contractors, empty equipment, write lockout plans or procedures, etc.). The commenter urges the District to extend this to at least three days. *(EID)*	1.21-28. The District considers that reducing the emissions from a significant leak should be a high priority for the company. The company should already have written lockout plans and procedures for addressing leaks and a contingency plan for quickly attempting a repair.
1.21 sec. 4.3 The definition of "extraordinary efforts" should be in sec. 1. *(GLI)*	1.21-29. The phrase "extraordinary efforts" is used only in section 4.3. Therefore, the District considers it appropriate to define this phrase within section 4.3.
1.21 sec. 4.4 Since the federal LDAR programs already require extensive documentation for "delay of repair," another supervisory signature should not be required. *(GLI)*	1.21-30. The federal requirement of documentation of a delayed repair does not require a person with supervisory authority to approve adding a leaking component to a delayed repair list. The District considers it appropriate to require a supervisor to approve, and thus be aware of, a decision to not repair a leaking component for an extended period of time.
1.21 secs. 5.1 and 5.8 The wording appears to be incorrect. It should require monitoring for leakage past the first pressure relief component, which is not necessarily a valve. *(GLI)*	1.21-31. The District agrees and will change the language in both sections to refer to a leak past the first pressure relief component.

Section ... Comment ... From	Comment No. District Response
1.21 sec. 5.2 If a facility installs pumps, compressors and agitators after July 1, 2006, does the facility have the option of choosing which piece of equipment will need the shaft sealing system? *(Borden)*	1.21-32. No. The requirement for a shaft sealing system applies to the pump, compressor, or agitator that is installed on or after July 1, 2006. It is not an option as to which pump, compressor, or agitator is to be equipped. There are options for what type of shaft sealing system may be installed.
1.21 sec. 5.2 Shaft sealing systems should only be required of equipment meeting the minimum service criteria of the applicable federal LDAR regulation: 5% OHAP service [Subpart H], 10% VHAP service [Subpart V], etc. This should be addressed by fixing the applicability of the entire regulation. *(GLI)*	1.21-33. The intent of Regulation 1.21 is to enhance the federal LDAR requirements.
1.21 sec. 5.4 This section contains a number of specific requirements by reference to other organizations' standards or codes (e.g., American National Standards Institute, American Petroleum Institute, American Society of Mechanical Engineers). Who will inspect the facilities and enforce these standards? (*EPA*)	1.21-34. This requirement identifies established standards for construction of new equipment. New components would be sold with documentation certifying compliance with applicable standards. The company would have the ultimate responsibility to certify compliance with this requirement. If appropriate, the District would consult with qualified experts to determine whether compliance with these standards was achieved.
1.21 sec. 5.6 It would be less confusing if Reg. 1.21 adopted MACT terminology, such as "unsafe-to-monitor" and "difficult-to-monitor," instead of using their own terms. *(GLI)*	1.21-35. The District does not consider the specific "2-meter" identification to be inconsistent with the federal terms.

Section ... Comment ... From	Comment No. District Response
1.21 sec. 5.7 Consider alternative standard of pressure checking component before placing it in service. *(GLI)*	1.21-36. The District agrees that this requirement should allow for pressure-testing a component after the new component is installed and before placing the system in service, with the provision that the pressure test be done under the same or more stringent pressure conditions than would be experienced by the component during operation.
1.21 sec. 6 Please identify the expected criteria to be covered during the LDAR program training. *(Borden, EID)*	1.21-37. The District considers it appropriate to allow flexibility for each company to design a training program that adequately prepares employees to implement the LDAR program.
1.21 sec. 6 Training is a reasonable idea; however, annual training is a little excessive. Every three years should be more than sufficient. *(GLI)*	1.21-38. A company would have the flexibility to design a training program that would differ from year to year, providing updated information annually and repeating previously-taught information on an appropriate schedule. However, the District will revise the training provisions in sections 6.2.2 and 6.2.3 to require training at least every two years and to require that the LDAR plan pursuant to Section 13 identify the minimum training frequency and the components of the training program.

Section ... Comment ... From	Comment No. District Response
1.21 sec. 7.1 This section does not consider the use of a flow indicator, as allowed in 40 CFR 63.172(j)(1). Appropriate exemptions or more specific citations are needed to correct this. *(GLI)*	1.21-39. Section 7.1 does not add a substantive requirement or limit options that are provided in 40 CFR 63.172(j). Section 7.1 adds only a recordkeeping requirement if a company chooses the approach in 40 CFR 63.172(j)(2). 40 CFR 63.172(j)(1) already has a recordkeeping requirement, so it is not necessary to add a recordkeeping requirement if a company chooses the approach in (j)(1). The District will specify that this additional recordkeeping requirement applies only if the approach is 40 CFR 63.172(j)(2) is chosen by the company.
1.21 sec. 8.2 What does "continuous vacuum service" mean? Is there an intended difference between "continuous vacuum service" in this regulation and "vacuum service" in various MACT LDAR programs? The terminology should be consistent with the federal definitions. *(Borden, GLI)*	1.21-40. This means a component that is under a negative pressure at all times that the system is in operation. If a component is under a vacuum only part of the time that the system is in operation, then that component would not be exempt from the requirements of Regulation 1.21.
1.21 secs. 8.2.4 and 8.2.5 A sampling connection system and instrumentation system in compliance with any federal LDAR program's requirements should be exempted from Reg. 1.21. (Currently, the requirements found in the various LDAR programs are the same.) *(GLI)*	1.21-41. The intent of Regulation 1.21 is to use 40 CFR 63 Subpart H as the base LDAR program, recognizing that other MACT LDAR programs may be less stringent.
1.21 secs. 8.2.4 and 8.2.5 Do not specify the date of the federal rules; use the current version. *(GLI)*	1.21-42. The District agrees that the specific dates should be removed, and, pursuant to Regulation 1.15, the reference to the current federal regulation will be updated annually. If the District disagreed with a specific change in the federal regulation, specific rulemaking to Regulation 1.21 would be required.

Section ... Comment ... From	Comment No. District Response
1.21 sec. 9 The "minor modifications" already considered within EPA Method 21 (such as different calibration gas) should not require District approval. *(GLI)*	1.21-43. The District agrees and will remove this section.
1.21 secs. 11, 12 and 13 Please explain the inclusion of these sections in the regulation. *(GLI)*	1.21-44. The District considers that these additional LDAR program requirements are appropriate to enhance the effectiveness of an LDAR program. Section 11 addresses assurance that the data are representative of reasonable compliance with the component monitoring requirements. Section 12 addresses assurance that the overall program complies with these requirements. Section 13 requires the development of a plan to address how certain elements of the program will be implemented.
1.21 sec. 11 This section is not needed in this regulation. If it is retained, please provide a time frame for submittal, approval and implementation. *(GLI)*	1.21-45. The District considers the requirement of a data review plan to be appropriate for an enhanced LDAR program. This plan would be part of the leak detection and repair plan required to be submitted to the District pursuant to Section 13. Section 13.2 contains the time frame for submittal and implementation.
1.21 sec. 11 The requirement to prepare, submit for approval, and implement a data quality assurance and control plan for leak detection and repair technicians does not take into account the situation where a third-party contractor performs the monitoring. We pay the contractor to remain cognizant and to perform in accordance with EPA guidance related to how many components a well-trained technician can legitimately monitor per hour or day. *(DDE)*	1.21-46. The District considers this requirement to be appropriate regardless of whether the monitoring is done by company employees or a hired contractor.

Section ... Comment ... From	Comment No. District Response
1.21 sec. 12 This requirement should be dropped from this regulation due to economic and program administration considerations. (Explanations of what these are.) This whole section is unnecessary and unjustified. *(Borden, GLI, OxyVinyls)*	1.21-47. The EPA's National Enforcement Investigations Center (NEIC) has published the results of its audits of 47,526 components at 17 refineries in the EPA's *Enforcement Alert* (October 1999), available at: "http://es.epa.gov/oeca/ore/enfalert/propem.pdf". The average leak rate reported by the audited refineries was 1.3%, while the average leak rate determined by NEIC was 5.0%. The District considers it important to have an accurate accounting of the actual leak rate. However, the District will add a provision that will allow it to approve these third-party audits to be performed every three years after two consecutive audits show a high level of compliance with this regulation.
1.21 sec. 12 The independent third-party auditing requirements in Section 12 are offensive. District staff should be tasked with field-checking fugitive emission monitoring programs following EPA Method 21. This requirement as drafted fails to recognize that the bar code tags installed by the current contractor will be useless for the independent contractor's purposes. Accordingly, there will be additional costs to each plant site for the necessary additional and unnecessary tagging of components that may run into several thousand additional dollars per audit. In addition, the draft regulation specifies that the components monitored during one independent third-party audit cannot be remonitored (unless it is unavoidable) for the following two biennial audits. This means that every time a third-party contractor sets foot on the site, there will be additional costs to the site for the tagging and monitoring of all-different components. We fail to see how this requirement will improve the air quality or reduce any risks to public health. *(DDE)*	1.21-48. Although the District has the authority to inspect and verify compliance with District requirements, the District considers it the responsibility of the owner or operator to ensure compliance with these requirements. It is the District's understanding that bar codes on tags could be read by an auditor, and the District considers it reasonable for a company to provide bar code information to a third-party auditor retained by the company. It is the intent of section 12.1.2.3 that the third-party audit not monitor the same components during each such audit. The District considers that insuring that leak detection and repair is done correctly will reduce the emissions of toxic air contaminants, which will reduce ambient concentrations of these toxic air contaminants.

Section ... Comment ... From	Comment No. District Response
1.21 sec. 12 It is unfair to fugitive emission contractors, none of whom are based in Louisville, to establish a unique set of leak detection and repair program requirements applicable only in the Louisville Metro area. It is possible that some contractors will avoid offering services to Louisville customers because of the uniqueness of the local regulation. The contractors will incur additional costs in gearing up to meet the Louisville program specifications, which costs will be passed onto their Louisville customers. *(DDE)*	1.21-49. The District considers that adequate fugitive emission monitoring services will be available.
1.21 sec. 13 Affected sources should be allowed to incorporate applicable portions of the federal LDAR requirements to which they are subject into the District LDAR plan by reference. *(Borden)*	1.21-50. The intent of Regulation 1.21 is to enhance the LDAR requirements to which a company is currently subject. Such incorporation by reference would not be acceptable if those requirements are less stringent than what is required pursuant to Regulation 1.21. However, to the extent that those federal requirements are as stringent as the requirements of this regulation, the company could incorporate those portions by reference.
1.21 sec. 13 Each federal LDAR program has slightly different requirements for written information. The HON LDAR requirements don't necessarily make sense when applied to processes subject to other LDAR requirements. How will these be reconciled? *(GLI)*	1.21-51. The District encourages the companies that are subject to an LDAR program different than the HON LDAR program to streamline the two sets of requirements. Streamlining is a collaborative process, with the company, the District, and the EPA involved. If a company chooses not to streamline two sets of requirements, then it is the company's responsibility to ensure that both sets of requirements are met.

Section ... Comment ... From	Comment No. District Response
1.21 sec. 13 A provision should be inserted that requires the leak detection and repair plans to be updated at least on a five year basis and when ever new units or equipment are added to a facility. *(REACT)*	1.21-52. Section 13.1.4 requires the plan to address the identification of added equipment. The District would have the authority in section 13.2 to require changes to a plan if the plan as written does not meet the requirements of this regulation. The District does not agree that a plan would need to be updated on a regular basis. The construction of a new unit or process equipment would require the issuance of a construction permit by the District. If the plan needed to be modified because of the new equipment, then the updated plan would be required as part of the construction permit application review.
1.21 sec. 13.2 The deadlines of 120 days and 60 days for the submittal of leak detection and repair plans and revisions are too lengthy. The time periods should be reduced to 60 and 30 days, respectively. *(REACT)* The 120-day deadline should be extended to 180 days. *(LDAR Workgroup)*	1.21-53. The District considers the proposed time frames appropriate, given the complexity and significance of these requirements.
1.21 secs. 13.2 and 14.2 Requiring a leak detection plan within 120 days of promulgation places an undue burden on affected sources. This is on top of immediate requirements for enhanced emissions reporting, modeling, etc. The timing to implement all the requirements in the STAR package should be clearly justified in a RIA. *(EID)*	1.21-54. The District considers the time frames in sections 13.2 and 14.2of Regulation 1.21 to be reasonable.

Section ... Comment ... From	Comment No. District Response
1.21 sec. 14 The chemical applicability has not been adequately defined. First, the inorganic compound has to have the ability to leak: it must be gaseous or otherwise volatile. Solids can't leak. *(GLI)*	1.21-55. Other than the "HCL MACT," there is no other required LDAR program that addresses leaks of inorganic compounds. Thus, no other process unit would be defined as an affected facility pursuant to section 1.1.1. For any other process unit to be subject to Section 14, the District would be required to make the determination specified in section 1.1.2, which would take into consideration the physical state of the inorganic compound and the extent to which increased emissions from leaks may become harmful to public health or welfare.
1.21 sec. 14 The list of applicable chemicals should be limited to Categories 1 and 1A inorganic compounds. The District should simply list the few chemicals to which this applies. *(GLI)*	1.21-56. Section 14 of Regulation 1.21 is not intended to be limited to the Category 1 and 1A inorganic compounds.
1.21 sec. 14 As this regulation is written, inorganic LDAR only applies to companies that are under another federal LDAR (for VHAPs). How was that determined? *(GLI)*	1.21-57. In addition to being defined as an "affected facility" pursuant to section 1.1.1 for a process unit that is subject to a 40 CFR Part 60, 61, or 63 LDAR program, a process unit would become an "affected facility" if the District made a determination pursuant to section 1.1.2 that emissions from leaks could become harmful to public health or welfare.
1.21 sec. 14 There may not be adequate instrumentation available to detect the inorganic substances in question. There are instruments available to detect chlorine and ammonia. How are companies to detect other inorganics? *(GLI)*	1.21-58. Section 14.1.1 requires the identification of appropriate screening and sampling methods. If the District were to require an LDAR plan for an inorganic compound, the District would work collaboratively with the company to identify appropriate methods.

Section ... Comment ... From	Comment No. District Response
2.08 General Comment For businesses' operating budgets, the District should provide each company that will have to pay additional emission fees a statement that identifies the specific HAPs and tons that the fee is based on in order to fully evaluate the financial burden that will be placed on the businesses. For budgeting purposes, companies need this information at least a year in advance. *(GLI)*	2.08-1. The District will make this information available as soon as possible.
2.08 sec. 1.2 The regulation should specify what specific chemicals are included in "all the single pollutant actual emissions." *(GLI, LGE)*	2.08-2. The District is not proposing a change to this section, therefore the comment is not relevant to the STAR Program. This phrase has been in Regulation 2.08 since December 1993. This phrase means volatile organic compounds (VOCs) as a class, each pollutant regulated under Section 111 or 112 of the Clean Air Act, and each pollutant for which a national primary ambient air quality standard has been promulgated by the EPA (with the exception of carbon monoxide), but with the clarification that a pollutant qualifying under two "single pollutant" categories would be counted only once, for example, a hazardous air pollutant (HAP) regulated under Section 112 that is also a VOC or particulate matter.
2.08 sec. 2.4 Does "permits reviewed or issued" apply to permit renewals? *(GLI, LGE)*	2.08-3. Yes. The District is not proposing a change to this section, therefore the comment is not relevant to the STAR Program.
2.08 sec. 2.5.1.10 What is the significance of this change? Does this mean that every small source must pay on every pollutant – even if it is a minor source (<5 t.p.y.), emits less than the significance level, and is not subject to NSPS or NESHAP? *(GLI, LGE)*	2.08-4. Toxic Air Pollutant (TAP) emissions per se would no longer be considered in establishing the appropriate category for a construction permit. Section 2.4 explains how the appropriate category is determined.

Section ... Comment ... From	Comment No. District Response
2.08 sec. 6 Please consider instituting a per facility or per substance cap on fees associated with TACs (cf. sec. 1.3.2 for Title V emission fees). It would not be fair for one large source to pay for the bulk of the program. *(Noveon)*	2.08-5 After considering a range of options for splitting the STAR Program fee attributed to Title V sources, starting with dividing the amount equally across the 43 Title V companies and ending with apportioning the entire amount based upon reported HAP and ammonia emissions, the District chose the option of dividing one-half of the amount equally across the 43 Title V companies and the other half apportioned by reported emissions. The STAR Program fee attributed to the Group 2 stationary sources was divided equally across the Group 2 companies.
2.08 sec. 6 Fees should be based on actual or potential emissions of TACs rather than permit type. Among other reasons, this would provide a financial incentive for a facility to decrease or eliminate its TAC emissions. *(Borden, GLI)*	2.08-6 The STAR Program fees attributed to stationary sources were split between the Title V companies and the Group 2 companies based on the reported HAP and ammonia emissions from those two groups. The program fees established in Regulation 2.08 are applicable to only Fiscal Year 2005 and were based on the 2002 emissions inventory, the most recent completed, quality-assured emissions inventory available. Any program fees beyond Fiscal Year 2005 will be subject to formal rulemaking procedures. In drafting future program fee provisions, the District will consider the approach suggested.
2.08 sec. 6 – de minimis exemption The regulation should state that fees do not apply if the source, regardless of its classification (Title V, FEDOOP, etc.) has actual emissions of <25 t.p.y. for criteria pollutants, and <1 t.p.y. of HAP emissions. *(LGE)*	2.08-7. The District disagrees that a 25 tpy/1 tpy de minimis exemption should be established for applicability of fees. The effect of exempting companies from paying fees would be to increase the fees of other companies, an outcome contrary to an earlier comment.
2.08 sec. 6 The fee structure for years after 2005 should be included during the public review process. *(GLI, LGE)*	2.08-8. The future overall fee structure of the STAR Program has not been determined.

Section ... Comment ... From	Comment No. District Response
2.08 sec. 6 This proposed fee structure represents a significant new tax on Title V sources in Jefferson County. Without further justification, it is uncertain whether such a fee is warranted. For example, why can't implementation of the STAR program be handled largely by realignment of staff currently employed by the District? Most of the burden of the program is placed on Industry and not the agency. The agency resource costs should be clearly defined and related to the need. And while there may be a short-term increase, long-term, there should be little additional cost. HAP emissions should decline significantly over the next few years, under the federal MACT program. *(Ford)*	2.08-9 The amount of fees for the STAR Program that would be paid by industrial sources for Fiscal Year 2005 is proportional to the percentage of HAPs emitted by those sources in relation to the estimated HAPs emitted by all source categories. Implementing the STAR Program represents new and increased responsibilities for District staff that cannot be met by the current level of District resources. Five additional positions for the STAR Program have been approved for Fiscal Year 2005. A decline in HAP emissions will not necessarily reduce the risk from toxic air contaminants to an acceptable level.
2.08 sec. 6 The selected reporting period of 2002, used to serve as the basis for emission fee allocation, should be changed to 2004. Like Title V, any required fee should be based on the most recent data (e.g., 2004 versus 2002) which should be available by the time any required fees need to be collected. *(Ford)*	2.08-10 The deadline for industrial sources to submit 2004 emissions inventory data is not until April 15, 2005, and thus would not be available for use in establishing the STAR Program fees for Fiscal Year 2005. The 2002 HAP emissions are the most recent set of reported HAP emissions that have been quality assured by the District.
2.08 sec. 6 While most of the TACs are HAPs, about a dozen are not HAPs and there does not seem to be inclusion of non-HAP emissions into the fee computation equation. *(Ford)*	2.08-11. The District currently requires the submittal of only HAP and criteria pollutant emissions (plus ammonia, a $PM_{2.5}$ precursor emission). Thus, the District would not have the data to prorate STAR Program fees based upon the emissions of the TACs that are not HAPs.

Section ... Comment ... From	Comment No. District Response
2.08 sec. 6.3 Please estimate and disclose estimated program fees for the next five years for each company based on previously submitted data. Unless fee increases will be tied to the CPI, the District should publish an annual fee schedule which includes fee increases for five years forward, available at least 12 months prior to the due date for the fee and updated annually. *(EID)*	2.08-12. The future overall fee structure for the STAR Program has not been determined.
2.08 sec. 6.3.2 The FEDOOP fee structure should apply to facilities that are awaiting final approval of their FEDOOP applications. *(Arkema)*	2.08-13. The District considers a stationary source that has a current Title V permit to be a Group 1 stationary source, particularly if the company has not yet provided complete documentation that the stationary source would qualify for a FEDOOP permit. At the point that the District determines that such complete documentation has been submitted as part of the FEDOOP permit application, the District would consider the company a Group 2 stationary source for the purpose of the STAR Program.
2.08 sec. 6.3 In subsequent years, when emission information is available from smaller sources, the allocation of costs of the STAR program should be allocated proportionally to a facility's emissions for all facilities. There should be no base fee and no singling out of Title V companies. *(GLI)*	2.08-14. The future overall fee structure for the STAR Program has not been determined.

Section ... Comment ... From	Comment No. District Response
2.08 sec. 6.3.1.2 This states that the District will make available a list of all Title V sources, their HAP and ammonia emissions, and the percentage of the total for each source. This should be made available before formal review of these regulations. *(GLI, LGE)*	2.08-15. This information will be made available as soon as possible.
2.08 sec. 6.4 Permits should not be subject to immediate revocation within 30 days of receiving a fee invoice. For substantial fees, payment may have to be made corporately, which could require additional time. A better approach would be to invoke a late payment penalty, such as 2% per month, for payments received after the due date. Additionally, there could be a cut-off period, say six months, in which permit revocation would occur and an NOV be issued. Also, this should clearly state whether payment must be postmarked or received by the due date to avoid confusion. *(EID)*	2.08-16. This section does not provide for permit revocation within 30 days of the issuance of a statement of fees. Consistent with the failure to pay Title V emission fees (section 1.6), permits would be suspended, not revoked, for failure to pay program fees within 60 days of the due date. No fee provision of Regulation 2.08 deems a fee to be paid if it is postmarked by the deadline; the fee must be received by the deadline.

Section ... Comment ... From	Comment No. District Response
3.01 General Comment The District should refer to EPA regulations rather than its own definition of the AAQS to minimize the possibility of differing interpretations and confusion. *(Borden)*	3.01-1. The District considers including the NAAQS within the District's regulations to be more helpful than incorporating the NAAQS by reference. The District has used the EPA's notes for the NAAQS to avoid differing interpretations.
3.01 General Comment This rule is not necessary and should be deleted. The US EPA establishes the national ambient air quality standards under its authority in the Clean Air Act. Rather than have separate rules, reference to the federal ambient air quality standards should be sufficient to avoid any inadvertent omissions or conflicts. *(Ford)*	3.01-2. District regulations have included the National Ambient Air Quality Standards (NAAQS) since 1972. Having the NAAQS included in the District's regulations allows the District to directly enforce the NAAQS.
3.01 sec. 8 This provision refers to Regulation 3.04, which is being repealed and incorporated into this regulation. (*EPA*)	3.01-3. This savings clause applies to an emission standard that was established before Regulation 3.04 would be repealed. The fate of Regulation 3.04 after this time is of no consequence to the validity of the emission standard that exists in the permit.

Section ... Comment ... From	Comment No. District Response
5.01 General Comment The Necessity and Function section states that this regulation establishes the general provisions for toxic air contaminants and the federal requirements for hazardous air pollutants. The item should be reworded so that it does not state that it is establishing federal requirements. (*EPA*)	5.01-1. The District agrees that Regulation 5.01 does not establish the federal HAP requirements. The sentence in the Necessity and Function section will be reworded to more accurately reflect the purpose of this regulation.
5.01 General Comment The STAR program should not be a construction permit-based program. Decisions about EA will only be publicly reviewable during the comment period for the individual construction permit. The community at large has no meaningful way to provide input in toxics levels in a structured manner. This is a weakness of the Michigan program on which these regulations are based. *(Arkema)*	5.01-2. The purpose of the new Section 4, requiring a demonstration of environmental acceptability as part of the construction permit application review process, is to prevent new air toxics problems from being permitted. Many of the components of the STAR Program relating to industrial sources are implemented outside of the construction permit program, a significant difference between the Michigan program and the STAR Program.
5.01 General Comment A section should be added requiring notification of all members of the public who reside within a public health hazard zone, defined as within: (a) the isopleth for the one in one million cancer risk for all TACs; (b) the isopleth for 1.0 hazard quotients for all acutely toxic TACS; or (c) the isopleth for the 1.0 hazard quotient for all chronically toxic TACs. (*Sierra Club*)	5.01-3. The District disagrees that a requirement should be added to notify individuals as suggested. Regulation 5.21 section 2.2 establishes goals that may not be exceeded without an opportunity for public review and comment. A requirement of public review and comment will be added for permits that complied with section 4.1.2.2 that exceed the stated Kentucky Division for Air Quality's risk goal of $1 \otimes 10^{-6}$.

Section ... Comment ... From	Comment No. District Response
5.01 General Comment There are several provisions of this regulation that render the STAR program and its EALs unenforceable as a practical matter. The EALs are only enforceable if the construction and operating permits include emission standards based on the EALs in Reg. 5.21. However, Reg. 5.01 does not require any emission standards in operating permits; for existing sources; for sources that emit small amounts of certain criteria pollutants; or for sources that emit Category 2 and 3 TACs. (*Sierra Club*)	5.01-4 Requirements that are established in construction permits become applicable requirements in operating permits. Therefore, the construction permit TAC emission standards would be required to be included in the ensuing operating permit. The District acknowledges, however, that the language in sections 4.1.1 and 4.1.2 may not be clear that the allowed emission standard is required to become a permit condition and will rewrite these sections. Emission standards for existing processes and process equipment are developed pursuant to Regulation 5.21. The Part 5 Regulations do not address criteria pollutants to the extent that they are treated as criteria pollutants, although many TACs and HAPs would fall under the criteria pollutant grouping of volatile organic compounds or particulate matter. The initial focus of the STAR Program as it relates to existing sources is on the Category 1 and 1A TACs.
5.01 Sec. 1.1.1 We suggest changing the acronym BACc to BmACc to avoid confusion with other acronyms in the field (e.g., Bioaccumulation Concentration, Biologically Active Carbon, and Best Available Control). (*EPA*)	5.01-5. The District does not in its regulations use an acronym for any of the identified phrases. Thus, the District does not expect that using the acronym BAC_C for the benchmark ambient concentration for a carcinogen will cause confusion within the District's regulations.
5.01 Sec. 1.1.2 We suggest changing the acronym BACnc to BmACnc to avoid confusion with other EPA acronyms. (*EPA*)	5.01-6. The District does not in its regulations use an acronym for any of the identified phrases (from the previous comment). Thus, the District does not expect that using the acronym BAC_{NC} for the benchmark ambient concentration for noncarcinogenic effects of a TAC will cause confusion within the District's regulations.

Section ... Comment ... From	Comment No. District Response
5.01 Sec. 1.6 Please explain the rationale for exempting gas stations, solvent metal cleaners, commercial motor vehicle refinishers, and dry cleaners, and refer the reader to other regulations that would apply to them. (*EPA, LGE*)	5.01-7. The District intends to review the environmental acceptability of emissions from area sources, at least initially, on an area source category basis, not on a case-by-case basis for individual processes or process equipment. If the District determines that additional requirements are needed, the District will draft a new or modified regulation that will apply to that area source category.
5.01 Sec. 1.6.1 This item refers to Regulation 6.40, which applies to (§1.1) gas stations with throughput of >10,000 gallons/month and does not apply to (§1.2) small independent business marketers dispensing <25,000 gallons/month. These two criteria seem to leave room for confusion. (*EPA*)	5.01-8. EPA's Control Techniques Guideline (CTG) for Stage II controls established this dual throughput exemption as the presumptive norm. The District adopted this presumptive norm.
5.01 secs. 1.7 and 1.8 The definitions of Group 1 and Group 2 stationary sources should be based on the amount of TACs emitted, not permit type. *(Borden)*	5.01-9. The District considers the stationary sources included in Group 1 and Group 2 to be appropriate. More than 97% of the reported stationary source HAP and ammonia emissions are emitted from these sources.
5.01 sec. 1.8 The applicability language for Group 2 sources should recognize that facilities in the FEDOOP application process that are undergoing process changes to reduce emissions, or have recently completed emission reduction projects, should be grouped with existing FEDOOP facilities. *(Arkema)*	5.01-10. The District considers a stationary source that has a current Title V permit to be a Group 1 stationary source, particularly in the case in which the company has not provided complete documentation that the stationary source would qualify for a FEDOOP permit. When the District determines that such documentation is complete, the District will then consider the company a Group 2 stationary source for the purpose of the STAR Program.

Section ... Comment ... From	Comment No. District Response
5.01 sec. 1.9 The definition of "new or modified," without including the concept of a potential increase in emissions, could be too broadly interpreted for a modified unit. *(LGE)*	5.01-11. The purpose of section 1.9 is to define whether a construction permit is subject to the requirements of Section 4. Whether a change is considered to be a modification (and thus "modified") is determined by the definition of "modification" in Regulation 1.02 section 1.39.
5.01 sec. 1.9 The definition of "new or modified" process or process equipment includes many more process changes than the current Commonwealth of Kentucky toxics program, which is triggered when an EPA-defined modification is made. *(GLI)*	5.01-12. The purpose of section 1.9 is to define whether a construction permit is subject to Section 4. Whether a change is considered to be a modification (and thus "modified") is determined in accordance with the definition of "modification" in Regulation 1.02 section 1.39. To the District's knowledge, the DAQ's current toxics program consists of 401 KAR 63:020, which does not specifically identify modifications as a trigger for applicability.

Section ... Comment ... From	Comment No. District Response
5.01 sec. 1.9 and 5.21, 5.22 As proposed, it appears that alterations of existing sources to less toxic chemicals would be considered a modification and emission of the new chemical(s) would likely exceed the EA values prescribed in the tables. Such a result clearly is not in the best interest of community or the facility. For example, converting a 100 MMBtu per hour coal-fired boiler to natural gas would be a modification under the rules for which a comparison of the maximum concentrations of TACs from burning natural gas to the EAL_C (environmentally acceptable level) would be required. Applying published EPA TAC emission factors (AP-42) for natural gas burning, and applying some of the approaches provided in Regulation 5.22, exceedance of the ultra-conservative EALs can be expected. Thus, converting the coal-fired boiler could be prohibited after applying these rules literally. *(Ford)*	5.01-13. Regulation 5.21 establishes ambient standards for both existing and new processes and process equipment. Thus, both existing and new processes and process equipment would be required to comply with the requirements of this regulation. The District considers it prudent public policy not to allow new process equipment to be permitted if the emissions are not environmentally acceptable. Regulation 5.22 provides four methods of determining the maximum ambient concentration of a TAC, which is then used to determine compliance with the goals and standards of Regulation 5.21. Section 1.3 of Regulation 5.22 explains that the four tiers are expected to have different levels of conservatism, with Tier 1 being the simplest but most conservative method and Tier 4 being the most complex and least conservative method. Failure to demonstrate compliance for a specific emission with the goals and standards of Regulation 5.21 by a lower tier modeling method (of Regulation 5.22) does not necessarily mean that the emission would not be found to comply with the Environmental Acceptability goals and standards when using a higher tier modeling method.

Section ... Comment ... From	Comment No. District Response
5.01 sec. 1.9 The definition of "new or modified" applies the proposed full list of TACs retroactively to permit applications that came in before the regulations were adopted. Given the District's current backlog on permits, will the sources who have been waiting for their permits have to redo them and calculate risk from all 191 TACs? *(GLI)*	5.01-14. The new Section 4 requirement to demonstrate environmental acceptability would apply to any construction permit application involving a Category 1 or 1A TAC that was not issued before the effective date of the STAR Program. The new Section 4 requirement would not apply to a Category 2 or 3 TAC if an administratively complete construction permit application was received before the effective date of the STAR Program. Additionally, the new Section 4 requirement would not apply to a Category 2 or 3 TAC if the construction permit application, regardless of whether it is administratively complete, was received before June 30, 2004. If the new Section 4 requirement would apply, then compliance with Regulation 5.21 would be required. **Note:** Section 1.9 will be moved to Regulation 5.21.
5.01 secs. 1.9.1 and 1.9.2 Why was the word "increase" left out? Cf. Reg. 1.02 sec. 1.39 "modification." *(LGE)*	5.01-15. Whether a change requires a construction permit is determined in accordance with the definition of the term "modification" in Regulation 1.02 section 1.39, which includes the concept of "increase." The use of the term "modified" in Regulation 5.01 section 1.9 reflects the definition in Regulation 1.02; if a change did not involve an increase and otherwise did not qualify as a modification, then there would be no requirement for a construction permit and thus the process or process equipment would not be "modified" pursuant to Regulation 5.01 section 1.9. The purpose of Regulation 5.01 section 1.9 is to define whether a construction permit, as required pursuant to the Regulation 1.02 definition, is subject to Regulation 5.01 Section 4.

Section ... Comment ... From	Comment No. District Response
5.01 sec. 1.9.2 This is confusing. Does the District mean to include the cut-off date of June 30, 2004, which has already passed? Should it be the effective date of the regulation instead? *(Borden)*	5.01-16. The intent of the June 30, 2004, cut-off date is to exempt a construction permit application that was received by the District before that date from being subject to Section 4 for a Category 2 or 3 TAC. The June 30, 2004, cut-off date would not apply to a Category 1 or 1A TAC. However, the District will rewrite this definition to more clearly identify which construction permits are required to comply with Section 4. **Note:** The District will move Section 4 and the rewritten definition of section 1.9 to Regulation 5.21, with Section 4 becoming Section 3 of Regulation 5.21.
5.01 sec. 1.9 The District should consider adding an exemption for replacement or addition of pollution control devices that will only result in reduced emissions, such as Michigan's R 336.1285(d)-(f), and for changes to processes, process equipment or raw materials that do not increase emissions. *(LBI)*	5.01-17. The purpose of reviewing the resulting emissions from the replacement or addition of an air pollution control device is to ensure that the device is capable of reducing emissions to a level that is environmentally acceptable. If a control device were installed without such a review, but a subsequent review required by Regulation 5.21 Section 3 demonstrated that the controlled emissions did not meet the goals and standards in Section 2 of that regulation, then that control device might need to be replaced with a more effective control device, an outcome that would be avoided by a preconstruction review. By the definition in Regulation 1.02, a modification is a physical change (but not the addition of new process equipment) or change in the method of operation that increases an air pollutant emission or results in the emission of a new air pollutant. Pursuant to Regulation 2.03 section 1.1, a construction permit is required for a modification.

Section ... Comment ... From	Comment No. District Response
5.01 sec. 2 An original section on emissions testing and monitoring under 40 CFR 61 was deleted. The federal rules will continue to apply. Has this section been placed somewhere else in the regulations? (*EPA*)	5.01-18. The federal 40 CFR Part 61 (as well as Part 60 and 63), including the testing and monitoring requirements, are incorporated by reference in Regulations 5.02 and 7.02. Therefore, the Section 2 provisions in the current version of this regulation are not needed.
5.01 secs. 2 and 3 The Applicability and General Duty sections' last sentences tie the requirements for the TACs, HAPs and other TAPs to any process or process equipment modification. • Why is there no de minimis exemption? • Does process modification now include a change in raw materials? *(GLI)*	5.01-19. A de minimis emission is generally considered to be too small to be reported and evaluated individually. However, because a de minimis emission might contribute to a concentration of an air pollutant that was present in a quantity or duration that could be harmful to human health or welfare, the District does not consider it appropriate to exempt a de minimis emission from the general duty requirement. As appropriate, the District will add exemptions from requiring de minimis emissions to be reported and evaluated for environmental acceptability. The current regulations define a modification as including a change in a raw material if the change results in an increase in the emission of a regulated pollutant, e.g., a TAP, or the new emission of a regulated pollutant.
5.01 sec. 3 How will the District enforce the general duty clause? *(LGE)*	5.01-20. The general duty clause in Section 3 is contained in the current version of Regulations 5.03 and 1.09. This general duty clause is based on 401 KAR 63:020. The purpose of the procedures in Regulations 5.20, 5.21, and 5.22 is to provide certainty as to how compliance with this general duty clause will be determined.

Section ... Comment ... From	Comment No. District Response
5.01 sec. 3 This general duty requirement is overly broad and vague and should be deleted entirely. (Explanation) At a minimum, the terms "or may be" should be deleted in the first sentence. In the second sentence, the term "could be" should be replaced with "is" and the terms "and welfare" and "animals, and plants" should be deleted. *(Ford)*	5.01-21. The general duty requirement in Section 3 is the District's incorporation of the Kentucky regulation 401 KAR 63:020. State law requires the District's regulations to be at least as stringent as the State's regulations. The phrase "or may be" in the first sentence is the exact wording of the State regulation. The phrase "that could be" in the second sentence is different than the State regulation and the District will change this to the State's phrase "as to be." The phrases "and welfare" and "animals, and plants" are exactly as worded in the State regulation.
5.01 sec. 3 Explain the regulatory impact on the regulated community and the public including the estimated costs and savings associated with the action, the feasibility of all alternatives considered, and a comparison with any minimum or uniform standards under the CAA or any other federal requirement (the "RIA information") that justifies the all-encompassing general duty clause. *(LGE)*	5.01-22. The RIA will be developed and made available as required by Regulation 1.08.
5.01 sec. 3 The general duty clause in this section is not adequate, by itself, to assure that the STAR program is complied with. Specific permit limits are required to assure compliance and enforceability. (*Sierra Club*)	5.01-23. The District agrees. Section 4.1 requires that the allowed emissions standards that have been demonstrated to comply with Regulation 5.21 be put into construction permits. Likewise, Section 3 of Regulation 5.21 requires that the allowed emissions standards that have been demonstrated to comply with Regulation 5.21 be put into operating permits.

Section ... Comment ... From	Comment No. District Response
5.01 sec. 3 This section states that the owner of a facility will not allow any process or equipment to emit a TAC in a quantity or duration that could be harmful to the health and welfare of humans. For some chemicals, this wording could in theory prohibit any releases. (*EPA*)	5.01-24. For many chemicals, especially for carcinogens, the current science suggests that there is not a threshold concentration below which no adverse effect could occur. The methodology for determining an acceptable concentration of a specific TAC, including the establishment of a benchmark ambient concentration in Regulation 5.20 and the goals and standards established in Regulation 5.21, would take precedence over the general duty clause for that TAC. The benchmark ambient concentration for carcinogens is based on a risk level of $1 \otimes 10^{-6}$. At a level below this benchmark, there is still risk, but this would be deemed to be an acceptable risk.
5.01 sec. 3 Is the current wording intended to apply inside the fenceline or only beyond the fenceline? If inside the fenceline, it may supplement worker protections. (*EPA*)	5.01-25. This general duty clause is taken from the state regulation. Again, these regulations clearly establish the more specific requirement to demonstrate environmental acceptability in the ambient air and would take precedence over the general duty clause. Additionally, it is the District's understanding that worker protection on the property of the employer is under the purview of the appropriate occupational health agency and not the District. Occupational health programs provide protection of employees of "Company A" from the emissions of Company A on the property of Company A.

Section ... Comment ... From	Comment No. District Response
5.01 sec. 4 Please explain the reasoning of applying this section to modified processes and equipment as well as new processes and equipment. *(GLI)*	5.01-26. There is a long history in federal, state, and local laws and regulations of applying requirements equally to new and modified sources. The reasoning used for the STAR Program is no different than the reasoning behind these long-standing requirements. By definition, the term modification includes the concept of increased emissions, therefore, appropriate for new source review. **Note:** Section 4 will be moved to Regulation 5.21 Section 3.
5.01 sec. 4 This new permitting provision is overly inclusive and should provide other options. For example, processes or process equipment installed or modified to reduce toxic pollutant emissions or to meet the federal MACT should be excluded from these requirements. As MACT represents the maximum achievable control technology, it should be considered acceptable control under these rules. Further, it is uncertain how any demonstration can be made to comply with Section 3 as required by 4.1.2.2. Therefore, this section should be deleted. *(Ford)*	5.01-27. The District disagrees that compliance with a federal MACT standard should provide an exemption from Section 4. The initial MACT standards do not take into account the risk of the resulting emissions. Section 4.1.2.2 is, in practical terms, a requirement to comply with the Kentucky general duty requirement for toxics, which is found in 401 KAR 63:020. The same process would be used to demonstrate compliance with section 4.1.2.2 as would be used to demonstrate compliance with 401 KAR 63:020 to the Kentucky Division for Air Quality.
5.01 sec. 4.1 This section requires that construction permits for certain new or modified sources that may emit a toxic air contaminant include emission standards to implement Reg. 5.21. Reg. 5.01 is silent on whether emission standards are also required in operating permits or for existing sources. Thus, Sec. 4.1 should be modified to apply to both construction and operating permits and new, modified, and existing sources. (Recommended language included.) (*Sierra Club*)	5.01-28. Requirements that are established in construction permits become applicable requirements in operating permits. Therefore, the construction permit TAC emission standards would be required to be included in the ensuing operating permit. Emission standards for existing processes and process equipment are developed pursuant to Regulation 5.21. **Note:** Section 4 of Regulation 5.01 will be moved to Regulation 5.21 Section 3.

Section ... Comment ... From	Comment No. District Response
5.01 sec. 4.1.1 This section only requires that TAC emission standards be established in construction permits for Group 1 and 2 stationary sources. The permits for other new or modified sources that do not fall into either group would not contain any conditions to make the provisions of the STAR program enforceable as a practical matter. (Explanation) (*Sierra Club*)	5.01-29. Section 4 establishes the affirmative requirement that the Category 1, 1A, 2, and 3 TAC emissions from Group 1 and 2 stationary sources be demonstrated to be environmentally acceptable. This does not prohibit the District from reviewing, and if necessary, regulating other situations if it considered that the emissions would not comply with the general duty clause of Section 3.
5.01 sec. 4.1.2 This section requires the construction permit for a new or modified process that emits a category 2 or 3 TAC to only "demonstrate" that it complies with the EALs in Reg. 5.21, Sec. 2.2 or "demonstrate" that it complies with Reg. 5.01 sec. 3. The method or criteria that would be used to make this demonstration should be identified. (*Sierra Club*)	5.01-30. Compliance with the EALs of Regulation 5.21 would be demonstrated as provided in Regulations 5.20, 5.21, and 5.22. Alternatively, in section 4.1.2.2, the District has provided an opportunity identical to that used by the Kentucky Division for Air Quality (DAQ) for approval of a construction permit application involving Category 2 and 3 TACs. In the DAQ's process, environmental acceptability is demonstrated on a case-by-case basis. The DAQ does not have promulgated procedures and criteria for complying with 401 KAR 63:020.
5.01 sec. 4.1.2 A one-time demonstration does not make a condition continuously enforceable over the life of the facility. Therefore the provisions of the STAR program as they relate to Category 2 and 3 TACs are not enforceable as a practical matter for 153 TACs, or 80% of those regulated under the STAR program. (*Sierra Club*)	5.01-31. The allowed emission standard for a Category 2 or 3 TAC, which has been demonstrated to be environmentally acceptable, will be incorporated as a permit condition in the construction permit and the ensuing operating permit, thus becoming enforceable.
5.01 Sec. 4.1.2.2 Line 97 ends with "and." It appears something has been omitted. (*Sierra Club*)	5.01-32. There has not been anything omitted from line 97. The "and" is the connection between sections 4.1.2 and 4.1.3.

Section ... Comment ... From	Comment No. District Response
5.01 sec. 4.1.3 Will a company have to install a continuous or intermittent emissions or parametric monitoring system if it is demonstrated that it is below the limit? *(GLI)*	5.01-33. A determination by the District to require emissions or parametric monitoring would be based on many factors. Demonstrating that expected actual emissions would be below the allowed emission level would be necessary for approval of the construction permit. The District would not require such monitoring if the process did not have the potential to exceed the allowed emission level.
5.01 Sec. 4.2 This is another reference to exempting several area source types from these rules. Are these source types covered in another District regulation? (*EPA*)	5.01-34. The District intends to review the environmental acceptability of the emissions from area sources, at least initially, on an area source category basis, not on a case-by-case basis for individual processes or process equipment. If the District determines that additional requirements are needed, the District will draft a new or modified regulation that will apply to the area source category.
5.01 sec. 4.2.5 All cold cleaners should be exempted. The efforts to calculate emissions, determine model parameters and model the impact of a parts washer is not an appropriate use of resources, considering the minuscule amount of emissions they generate during the few hours each year that the lids are open. *(Noveon)*	5.01-35. One of the reasons for exempting cold cleaners located at these selected stationary sources is that the owner or operator would likely not be required to demonstrate environmental acceptability for any other process or process equipment. Conversely, a Group 1 or Group 2 company is likely to have already gained experience in demonstrating environmental acceptability for other processes or process equipment. If the emissions are indeed as small as suggested by the commenter, then the emissions would either be deemed de minimis or would be demonstrated to be environmentally acceptable using a lower tier approach provided by Regulation 5.22.

Section ... Comment ... From	Comment No. District Response
5.01 sec. 4.2.5 Small sink-like Safety Kleen cold cleaners used for maintenance purposes should be considered exempt regardless of location. Therefore, an additional exemption such as that drafted below should be added. *4.2.5.4 The cold cleaner has a sink-like design and is used only for maintenance purposes.* *(Ford)*	5.01-36. One of the reasons for the cold cleaner exemptions in section 4.2.5 is that these cold cleaners are located at small stationary sources which would not be required to demonstrate environmental acceptability for any other process or process equipment. The District considers that demonstrating environmental acceptability for a cold cleaner by the owner or operator of a Group 1 or 2 stationary source would not pose an unreasonable burden.
5.01 sec. 5 If a company's emission in Regulations 5.21 and 5.22 are determined to be low enough that no controls are required, will sec. 5 allow the company to be in compliance with Regulations 5.11 and 5.12 as well? If not, please explain. *(GLI)*	5.01-37. When an emission standard for a TAC is established pursuant to Regulation 5.21, any limit for that chemical pursuant to Regulation 5.11 or 5.12 would be removed. The District intends to remove the new draft Section 5 from Regulation 5.01 because the savings clause is included in Regulations 5.11 and 5.12 and does not need to be duplicated in Regulation 5.01.

Section ... Comment ... From	Comment No. District Response
5.11 General Comment Please incorporate the text of the requirements instead of referring to an out-of-date version of a Kentucky rule. *(Noveon)*	5.11/12-1. The text of the incorporated Kentucky regulations is available on the District's web site. Given that emission standards pursuant to Regulation 5.11 were developed only for processes and process equipment that were in existence before 1986 and not modified since, the District does not consider it necessary to revise Regulation 5.11 to include the full text at this time.
5.11 General Comment This regulation should be repealed upon approval of the STAR program. These regulations are duplicative and could conflict. As was evaluated and concluded by the state, this regulation has little or no impact on emission levels and has consumed significant public and private resources (especially in the Title V permitting process). *(LGE)*	5.11/12-2. Many of the current permit conditions developed pursuant to Regulation 5.11 refer to compliance with the regulation rather than specifying an exact emission limit, such as pounds per hour or micrograms per cubic meter. Repealing Regulation 5.11 upon adoption of the STAR Program while there are still applicable permit conditions that refer to this (then repealed) regulation could cause confusion. The STAR Program regulations and Regulation 5.11 are not duplicative because the STAR Program is designed to provide an entirely different level of protection of public health and welfare. Any emission standard developed pursuant to Regulation 5.11 will be removed when an emission standard for that chemical is developed pursuant to the STAR Program. The District notes that the DAQ has included a savings clause for emission standards developed pursuant to 401 KAR 63:021 and 63:022 that were already in place when these regulations were revised.

Section ... Comment ... From	Comment No. District Response
5.11 sec. 2 Although this regulation is titled *Standards of Performance for Existing Processes and Process Equipment Emitting Toxic Air Pollutants,* §2 states that the regulation applies to processes and equipment that were in existence prior to November 1986. Some processes could have come on line between 1986 and the present. This could be confusing to readers. The reference to KAR 63:021 leads to a brief description of an air toxics control program, and further refers the reader to several other citations. Perhaps a narrative in the Louisville regulation would help to make this sequence of references more understandable for those who wish to learn the provisions of the new regulations. (*EPA*)	5.11/12-3. Processes and process equipment that are new or modified since November 1986 are subject to Regulation 5.12. The Kentucky regulation that is incorporated by reference can be easily found on the District's web page adjacent to Regulation 5.11. The District does not consider the suggested narrative necessary because this regulation would in effect be sunsetted except for the savings clause, which would continue to apply to existing permit conditions.
5.11 sec. 6 This section refers to "adjusted significant levels of individual pollutants." This term should be defined. (*EPA*)	5.11/12-4. This term is defined in the Kentucky regulation that is incorporated by reference.
5.11 sec. 7 Does this mean that all emission units that previously fell below the significant level must now model to see if they trigger 5.21? If modeling shows that 5.21 is not triggered, will 5.11 be removed from the existing permit? *(LGE)*	5.11/12-5. As specified in Regulation 5.21, the owner or operator of a Group 1 or Group 2 stationary source is required to demonstrate environmental acceptability for Category 1 and 1A TACs. Status pursuant to Regulation 5.11 has no bearing on compliance with Regulation 5.21. Any emission standard developed pursuant to Regulation 5.11 will be removed when replaced by an emission standard pursuant to Regulation 5.21.

Section ... Comment ... From	Comment No. District Response
5.12 General Comment Please incorporate the text of the requirements instead of referring to an out-of-date version of a Kentucky rule. *(Noveon)*	5.11/12-6. The text of the incorporated Kentucky regulations is available on the District's web site. Given that no new emission standard pursuant to Regulation 5.12 will be developed after adoption of the STAR Program, the District does not consider it necessary to revise Regulation 5.12 to include the full text at this time.
5.12 General Comment This regulation should be repealed upon approval of the STAR program. These regulations are duplicative and could conflict. As was evaluated and concluded by the state, this regulation has little or no impact on emission levels and has consumed significant public and private resources (especially in the Title V permitting process). *(LGE)*	5.11/12-7. Many of the current permit conditions developed pursuant to Regulation 5.12 refer to compliance with the regulation rather than specifying an exact emission limit, such as pounds per hour or micrograms per cubic meter. The District considers that repealing Regulation 5.12 upon adoption of the STAR Program while there are still applicable permit conditions that refer to this (then repealed) regulation would cause more confusion. The STAR Program regulations and Regulation 5.12 are not duplicative because the STAR Program is designed to provide an entirely different level of protection of public health and welfare. Any emission standard developed pursuant to Regulation 5.12 will be removed when an emission standard for that chemical is developed pursuant to the STAR Program. The District notes that the DAQ has included a savings clause for emission standards developed pursuant to 401 KAR 63:021 and 63:022 that were already in place when these regulations were revised.

Section ... Comment ... From	Comment No. District Response
5.12 sec. 1 It is not clear how this regulation dovetails with Regulation 5.21 §2.8.2 which provides environmental acceptability standards for equipment that may emit TAC's. Do the goals and standards in Regulation 5.21 apply to chemicals that are referenced in KAR 63:022 but that are not one of the TAC's listed in the new Louisville regulations? (*EPA*)	5.11/12-8. The savings clause specifies that an emission standard developed pursuant to Regulation 5.12 will be removed when it is replaced by an emission standard developed pursuant to Regulation 5.21. The initial STAR Program focuses on certain stationary source groups and TACs and requires affirmative demonstrations of environmental acceptability for such stationary sources and TACs, but establishes the structure for determining environmental acceptability for all TACs.
5.12 sec. 2 As with Regulation 5.11, the applicability of this regulation is not clear. Although the title of this regulation is *Standards of Performance for New or Modified Processes or Process Equipment Emitting Toxic Air Pollutants*, §2 states that the rule applies to emissions from new or modified processes or equipment that were constructed or modified after November 1986, and refers the reader to the Kentucky Code. The Kentucky code cited again refers the reader to other citations. Again, a narrative might help the reader understand District and Kentucky regulations. (*EPA*)	5.11/12-9. Processes and process equipment that are new or modified since November 1986 are subject to Regulation 5.12. The Kentucky regulation that is incorporated by reference can be easily found on the District's web page adjacent to Regulation 5.12. The District does not consider the suggested narrative necessary because this regulation will in effect be sunsetted except for the savings clause, which would continue to apply to existing permit conditions.
5.12 sec. 6 Does this mean that all emission units that previously fell below the significant level must now model to see if they trigger 5.21? If modeling shows that 5.21 is not triggered, will 5.12 be removed from the existing permit? *(LGE)*	5.11/12-10. As specified in Regulation 5.21, the owner or operator of a Group 1 or Group 2 stationary source is required to demonstrate environmental acceptability for Category 1 and 1A TACs. Status pursuant to Regulation 5.12 has no bearing on compliance with Regulation 5.21. Any emission standard developed pursuant to Regulation 5.12 will be removed when replaced by an emission standard pursuant to Regulation 5.21.

Section ... Comment ... From	Comment No. District Response
5.20, 5.21, 5.22 General Comment The District should use a tiered or phased approach. Tier 1 – Category 1 TACs Tier 2 – any additional chemicals that present a known risk Followed by a study to assess residual risk and assess the need for additional regulation. *(EID)*	5.20-1. The District has used a different phased approach. The District disagrees that monitored data establishing unacceptable concentrations are needed before the District should take action on a specific TAC.
5.20, 5.21, 5.22 General Comment Use of presumed benchmark risk levels rather than actual human exposure risk levels disconnects the relationship between emissions, atmospheric dispersion ability and population exposure normally found in risk based standards. Without establishing the relationship of emissions of a specific air toxic to actual population exposure, there will be no focused risk reduction program to address hot spots. Stringent emission controls may be inappropriately applied to industry groups having little impact on population exposure and no controls on those source categories that have the most impact on human risk. *(GLI)*	5.20-2 The District considers the program as drafted, based upon concentrations in the ambient air, to be the appropriate framework for a risk-based program. The District notes that many of the state risk-based toxics programs around the country use this same approach. However, the District will add a provision to Regulation 5.21 sections 2.3 and 2.6 that will allow the District to consider land use and demographic factors in determining whether to approve a request for modification of an environmental acceptability goal.
5.20, 5.21, 5.22 General Comment The methodologies in these regulations are conservative and unclear, which will make them difficult to comply with. *(EID)*	5.20-3. The proposed methodologies are scientifically well accepted. The EPA and many states use these methodologies in similar toxics programs.
5.20, 5.21 General Comment The District needs a "change management" procedure when fenceline limit concentrations must be changed. The District should conduct a notice-and-comment rulemaking on a regular schedule, say every six months, for proposed air toxics limits changes. *(Arkema)*	5.20-4. The District disagrees and considers that it is appropriate to base these health-based benchmark ambient concentrations on the best available data accepted by the respective agencies. Regulation 5.21 sections 3.11 and 3.12 contain mechanisms to accommodate such changes.

Section ... Comment ... From	Comment No. District Response
5.01, 5.20, 5.21 General Comment The District should allow a fixed period of time and a 3-step process for facilities subject to a new limit: • notice and comment rulemaking on the new limit • facility proposes controls to meet the new fenceline limit or evaluate an appropriate margin of safety • facility then has 18-24 months to implement any required controls An "application shield" should protect facilities while the permit process is ongoing, to end when the facility certifies normal operation under the new compliance plan. *(Arkema)*	5.20-5. The District disagrees that a revised benchmark ambient concentration (BAC) should be subject to a formal public review process. Regulation 5.21 section 3.11 includes a schedule for complying with any more stringent emission standard resulting from a change in the BAC. This schedule allows up to 36 months after notification by the District to comply with the more stringent emission standard. An approved compliance plan for this situation would become an enforceable requirement of the applicable District permit. The company would then be required to comply with any previous emission standard until replaced by the new emission standard on the schedule included in the compliance plan.
5.20, 5.21, 5.22 and 5.23 General Comment A staff report should be provided when the draft rule is released that supports the calculations and assumptions in Regs. 5.20, 5.21, 5.22 and 5.23. (*Sierra Club*)	5.20-6. The District will provide additional information on some of the components of these draft regulations as discussed in specific comment responses. During the extensive outreach activities undertaken by the District, including over 50 meetings, the District has provided explanations of many of the components of these draft regulations. Additionally, the District has posted the benchmark ambient concentrations for the Category 1 and 1A TACs on the District's web page.

Section ... Comment ... From	Comment No. District Response
5.20, 5.21, 5.22 General Comment The District is not qualified to produce a product based on risk assessment. *(DDE)*	5.20-7. The risk-based STAR Program is based on methodologies that are scientifically well-accepted. The EPA and many states use these methodologies in similar toxics programs. If this comment is addressed specifically to Regulation 5.20 section 2.1.3, the District would make this determination only if the District had a qualified person on staff or retained a qualified individual.
5.20, 5.21, 5.22 General Comment The methodology piles conservatism upon conservatism to the point that the proposed regulations will set hard standards that are unachievable. *(DDE)*	5.20-8. Based on the experience of several mature state toxics programs, the District considers the standards rigorous but achievable.
5.20 General Comment The California and Michigan lists are inappropriate. The District should reflect EPA methodologies (listed). *(DDE)*	5.20-9. The EPA's IRIS has been given the first position in the hierarchy of available sources of information upon which to establish a benchmark ambient concentration (BAC). If, however, IRIS does not contain information upon which a BAC would be established for a specific chemical, the District will address the toxic effects of that TAC using other credible sources of information. The District considers the identified lists to be credible and scientifically based.

Section ... Comment ... From	Comment No. District Response
5.20 General Questions • Why are so many informational sources listed to find out what level is harmful? Hasn't EPA looked at these chemicals? • If EPA hasn't determined a harmful level, why do the regulations require manipulating a host of loosely related levels to come up with one? • What are the harmful levels? • Do we know what levels are in the air? • Do we have any reason to believe they are at harmful levels? *(LGE)*	5.20-10. The EPA allocates resources to review chemicals based upon national significance. Chemicals that may adversely impact Louisville Metro may not be significant on a national level. The District has proposed the use of several mechanisms to establish a benchmark ambient concentration for a chemical, giving first preference to the EPA's findings published in the EPA's Integrated Risk Information System (IRIS). The BAC_C for TACs that are determined to be carcinogens is the concentration that represents a risk of one in one million. The BAC_{NC} for the noncarcinogenic effects of a TAC is the concentration that is likely to be without an appreciable risk of deleterious effects on a long-term (chronic) basis. Setting a BAC is independent of whether a specific TAC would be at or above the BAC level in Louisville Metro. The West Louisville Air Toxics Study has monitored a number of chemicals and found 18 above the identified level of concern established by the West Jefferson County Community Task Force.
5.20 General Comment This regulation should: • Use EPA-accepted methodologies; • Exclude arbitrarily selected and inappropriate sources that drive standards to extremes; and • Provide for inclusion of health studies and other data as part of the standard-setting process in cases where EPA has not set standards. *(DDE)*	5.20-11. The District considers the STAR Program to be based upon technically sound methodologies and to identify credible sources of information for establishing BACs.

Section ... Comment ... From	Comment No. District Response
5.20 General Comment The STAR program must establish a standard for toxics that protects human health based on: • impact of current pollution levels on those who live close to sources; • reductions in toxics that can be achieved through technology and clean processes; • assessment of health conditions among those living close to sources of toxics. *(JRC/NBEJN)*	5.20-12. The District considers the goals of the STAR Program and the goals of this comment to be consistent, that is, the protection of the citizens of Louisville Metro from unacceptable concentrations of toxic air emissions. The STAR Program does not undertake a health assessment of those who live close to regulated sources. However, the District has been, and is, supportive of community-wide health assessments done by others.
5.20 General Comment – The District should develop the BACs The District should determine the BAC for each substance in 5.23 and publish them in a table that is part of the regulation (5.20 or 5.23). Determination of the BAC is ultimately the District's responsibility. *(ALA, Noveon, Solae)* It appears that each regulated source will have to develop BACs for its facility. This will place a heavy burden on the District and public for review. We suggest that the District develop and publish the BACs. (*Sierra Club*) The transparency is appreciated, but it would be more meaningful to see the values the District will apply, not just the procedure. *(EID)*	5.20-13. The District does not intend to require each regulated source to independently use the methodology in Regulation 5.20 to determine the BAC for each TAC. The District will undertake this process and make available a listing of the TACs for which the BAC has been determined by the District. The District will make this information available for the Category 1 and 1A TACs before the start of the formal public review process for the STAR Program. The District will continue this process for the Category 2 and 3 TACs, but would give priority to a TAC that a Group 1 or 2 stationary source included, or intends to include, in a construction permit application subject to Regulation 5.01 section 4.1.2.

Section ... Comment ... From	Comment No. District Response
5.20 sec. 2 Use appropriate experts to determine that a TAC is a carcinogen. The regulation does not list important experts such as IARC. *(EID)*	5.20-14. The District chose to specify the National Toxicology Program (NTP) because this program of the U.S. Department of Health and Human Services is required by the U.S. Congress to publish an annual list of the chemicals determined to be carcinogens. The District agrees that the carcinogen lists of the International Agency for Research on Cancer (IARC), a program of the World Health Organization, are internationally recognized and will add listing by IARC as a carcinogen to be another basis for determining that a TAC is a carcinogen.
5.20 sec. 2 The District is using a very inaccurate procedure to determine which constituents are inhalation carcinogens, and is not following the procedures it has set out. The example of ethyl acrylate is given. *(Arkema)*	5.20-15. The District disagrees. Ethyl acrylate, the example cited by the commenter, is listed by Michigan as a carcinogen, with an associated IRSL, the concentration that is representative of a risk of $1 \otimes 10^{-6}$. Thus, according to the procedure in section 2.1.1, ethyl acrylate is considered a carcinogen. If the comment is meant to suggest that ethyl acrylate should not be considered a carcinogen, the District notes that ethyl acrylate is listed as a Group 2B carcinogen by IARC. Additionally, both NIOSH and ACGIH indicate that their respective occupational inhalation exposure limit is based in part on the carcinogenic potential of ethyl acrylate.
5.20 sec.2 No explanation is given as to how the method for establishing proposed benchmarks and associated tabular calculation methods were chosen with regard to human health risk. An explanation and description of the method validity should be included. *(GLI)*	5.20-16. Section 2 first recognizes scientifically-based, credible sources of information regarding risk levels for specific carcinogens. Section 2 then recognizes a national (NTP) and will add an international (IARC) source of information for identifying carcinogens. Section 2 ends by using the criteria established by the National Toxicology Program for determining that a chemical is a carcinogen.

Section ... Comment ... From	Comment No. District Response
5.20 sec. 2.1.1 This section states that a TAC will be determined to be a carcinogen if a unit risk estimate or a related concentration for that chemical is included in the sources listed in §3.3. Note that §3.3.4 does not list concentrations or risk estimates - it lists methods for deriving unit risk estimates and benchmark ambient concentrations. (*EPA*)	5.20-17. The outcome of using one of the methods identified in section 3.3.4 is the development of a unit risk estimate. However, to avoid confusion, section 2.1.1 will be modified to read "... is included in any of the information sources identified in sections 3.3.1 to 3.3.3 or derived by using one of the methodologies listed in section 3.3.5."
5.20 sec. 2.1.2 This section expands the definition of carcinogen beyond those toxic contaminants for which information is available in one of the references in sec. 3.3. This language should be deleted, to allow facilities to only evaluate cancer risks for compounds for which data is available to do so. *(GLI)* If data for a compound is not available in one of the references in sec. 3.3, how is a facility to evaluate its carcinogenic risk? *(GLI)*	5.20-18. An environmental acceptability demonstration for a TAC that has been determined to be a carcinogen should reflect the additional cancer risk posed by that chemical. The District, however, recognizes that a significant effort may be involved in developing a unit risk estimate for a chemical. Therefore, the District will propose a default BAC_C value, similar to the concept of the default BAC_{NC} value established in section 4.11. Two possible approaches yield approximately the same result, 0.0004 $\mu g/m^3$. The first approach is to sort all of the BAC_C values that the District has derived so far. The 90th percentile number is approximately 0.0004 $\mu g/m^3$. The second approach is to divide the BAC_{NC} by the BAC_C for that TAC to determine how much more stringent the BAC_C is than the BAC_{NC}. The result for most TACs is between one and three orders of magnitude, with approximately equal numbers for one, two, and three orders of magnitude. Thus, the average difference is two orders of magnitude. Reducing the BAC_{NC} 0.04 $\mu g/m^3$ default value, which was based on a 95th percentile analysis, by two orders of magnitude gives 0.0004 $\mu g/m^3$. The District considers this default value to be one that will provide a reasonable level of protection given the uncertainly of the BAC_C that would be derived from using one of the methodologies in section 3.3.4.

Section ... Comment ... From	Comment No. District Response
5.20 sec. 2.1.2 If the District adds a new compound to the list of carcinogens, the regulations should also require the District to determine a URE or BAC that companies can use to assess the risk of their emissions from such compounds. It is too much to expect area businesses to independently research and determine the health effects of new compounds if EPA, California, Michigan and the District have not been able to do so. *(GLI)*	5.20-19. The EPA and other state agencies allocate resources to review chemicals based upon national or state significance. Chemicals that may adversely impact Louisville Metro may not be significant on a national or other state level. Therefore, a URE or BAC not having already been established by the EPA, California, or Michigan does not, in and of itself, mean that those agencies have not been able to develop a risk number, but may mean only that those agencies have not set a priority to develop a risk number. The District will propose a default BAC_C value, similar to the concept of the default BAC_{NC} value established in section 4.11. This default value is discussed in the response to Comment No. 5.20-18.
5.20 secs. 2.1.2 and 2.1.3 There are other sources, such as the American Conference of Governmental Industrial Hygienists classes of confirmed and suspected human carcinogens. *(Noveon)*	5.20-20. The District considers that specifying the National Toxicology Program (NTP), and, based upon a comment, adding the International Agency for Research on Cancer (IARC), provides adequate coverage for determining that a TAC should be considered a carcinogen.
5.20 sec. 2.1.3 Does this section give the District the authority to conclude an air contaminant is carcinogenic even after such sources as the NIH, EPA and others have not? Is the District technically prepared to do this in the absence of definitive conclusions or research made by NIH, EPA etc.? What expertise does the District have to enable it to do so? *(EID, LGE)* The District does not have the expertise to determine the carcinogenicity of a chemical. This section should be deleted. *(LGE, Noveon)*	5.20-21. Yes, it does. The District recognizes that it would need to have sufficient evidence to make a determination pursuant to section 2.1.3.

Section ... Comment ... From	Comment No. District Response
5.20 sec. 2.1.3 The District should avoid making determinations as to whether a chemical should be classified as a carcinogen where the peer-review process by experts in this arena has not been completed and decided. Rather, only those chemicals for which sufficient scientific review has occurred and credible evidence has been published in peer-reviewed reports, e.g., the information published by EPA in IRIS or under IARC, should be used. *(Ford)*	5.20-22. The District intends to add the International Agency for Research on Cancer (IARC) as a definitive source of information that a chemical should be considered a carcinogen, similar to the provision in 2.1.2 relating to the National Toxicology Program. Section 2.1.3 requires there to be sufficient, credible information for the District to make a determination that a chemical should be considered to be a carcinogen.
5.20 sec. 3 The District should use a range of risk to determine the appropriate level on a case-by-case basis rather than 1 x10^{-6}. Factors such as population risk and economic factors should be considered to arrive at a level that provides an ample margin of safety for residents, while not overburdening industry. *(EID)*	5.20-23. The District disagrees that a range of risk should be used. However, the District notes that the $1 \otimes 10^{-6}$ risk level for a single carcinogen from a single process or process equipment is included in Regulation 5.21 as a goal, with some flexibility built into the regulation, such as in Regulation 5.21 sections 2.3 and 2.6, where factors such as those mentioned by the commenter may be considered.
5.20 sec. 3 The District should offer an alternative method for determining human risk based on census data and meteorological dispersion in truly ambient air for comparison to the goal of 1 x10^{-6}. *(GLI)*	5.20-24. The District disagrees. The District considers that the program as drafted, based upon concentrations in the ambient air, is the appropriate framework for a risk-based program. The District notes that many of the State risk-based toxics programs around the country use this same approach. However, the District will add a provision to Regulation 5.21 sections 2.3 and 2.6 to allow the District to consider land use and demographic factors in determining whether to approve a request for modification of an environmental acceptability goal.

Section ... Comment ... From	Comment No. District Response
5.20 sec. 3 The methodology employed reduces the URE [from IRIS] by a factor of $1x10^{-6}$. The URE already has a conservative estimate included in the determination of this factor. The result is that the BAC_C calculated pursuant to the regulation can effectively be several orders of magnitude more conservative than $1x10^{-6}$. This will require investing millions of dollars with no significant improvement in the health of residents. *(Süd-Chemie)* The URE is an ultra-conservative value and has several safety factors and conservativeness built in. We consider that the URE is likely to be well below a real threshold of one-in-a-million risk, and equating BAC_C to $1x10^{-6}$/URE is ultra-conservative. But such approach can be useful in establishing a "benchmark." *(Ford)*	5.20-25. The unit risk estimate (URE) is the risk that is associated with a specified concentration (specified in this section as 1 $\mu g/m^3$). In simple terms, the URE relates to the potency of the carcinogen. Equation 1 in section 3.1 has three terms: the BAC_C is a concentration, the URE is the potency of the carcinogen, and $1 \otimes 10^{-6}$ is a set risk. This equation establishes the concentration that is representative of a risk of one in one million. Generally the chemical-specific section in IRIS for a carcinogen lists both the URE and the concentration that is representative of different levels of risk, such as one in one million, one in one hundred thousand, and one in ten thousand.
5.20 sec. 3.1, 4.1, 5.1 Reformat the regulations to simply use the RfC value as the 1 $x10^{-6}$ risk goal. (Explanation given.) *(GLI)*	5.20-26. A Reference Concentration (RfC) developed by the EPA and published in IRIS is based upon the chronic (long-term) noncarcinogenic effects of a chemical. The EPA, in a different section of the IRIS report for that chemical, would discuss issues of carcinogenicity and, if developed, identify a unit risk estimate (URE), which establishes the potency of the chemical as a carcinogen. The benchmark ambient concentration for a carcinogen (BAC_C) is determined from the URE. Typically, the BAC_C is much more stringent than the benchmark ambient concentration for the chronic noncarcinogenic effects of a chemical (BAC_{NC}), which is the RfC if an RfC is published in IRIS. Additionally, the RfC is not intended to relate to acute (short-term) effects of a chemical, and thus is not appropriate to use for Section 5.

Section ... Comment ... From	Comment No. District Response
5.20 sec. 3.2 What does "representative" mean in this context? How will it be determined whether an alternative concentration is representative of a lifetime cancer risk of $1x10^{-6}$? *(LGE)*	5.20-27. In this context, "representative" means that the specified concentration was determined to be a $1 \otimes 10^{-6}$ risk, the same as the result of Equation 1.
5.20 sec. 3.3.1 Some UREs have been re-evaluated by EPA but not yet adopted into IRIS. The District should allow facilities to use re-evaluated UREs that are awaiting adoption into IRIS. Facilities should not be penalized for EPA's failure to adopt re-evaluated risk factors into IRIS in a timely manner. *(Borden)*	5.20-28. The EPA undergoes a rigorous scientific review process before adding or modifying a reference concentration or unit risk estimate in the published IRIS. The District does not consider that it is appropriate to use a URE that is different than the current listed value in IRIS.
5.20 secs. 3.3.3, 3.3.4.4, and 4.4 We do not recognize Michigan rules as an authoritative reference. Only nationally and internationally recognized references should be used. These sections should be removed. *(Noveon)*	5.20-29. With regard to sections 3.3.3 and 4.4, for which a BAC for a TAC is set by a value developed by Michigan if there is not a basis in IRIS or California, the District considers that the Michigan program is credible. One reason for including the extensive list of Michigan values is to minimize the number of TACs for which there is not a readily available value that may be used to establish environmental acceptability. The District would review the appropriateness of using another credible source of risk-based values if suggested to the District. With regard to section 3.3.4.4, this methodology is one of four specific methodologies that may be used. A company may choose to use any listed methodology or an alternative methodology that is demonstrated to be appropriate (section 3.3.4.5).

Section ... Comment ... From	Comment No. District Response
5.20 sec. 3.3.4 This section should be deleted. The guidance documents listed here do not provide the detailed data or mathematics necessary for deriving UREs/BACs. If a BACc cannot be determined through the use of references in secs. 3.3.1 to 3.3.3 (often because EPA, California and Michigan do not themselves have sufficient information to calculate the numbers), then it should not be considered a carcinogen for purposes of this regulation and only non-carcinogenic risks should be evaluated. *(GLI)*	5.20-30. The listed guidance documents provide the methodology for deriving a unit risk estimate (URE). These documents are not intended to contain the data necessary to derive a URE for a specific chemical. The methodologies listed are EPA-identified methodologies. National and state programs such as EPA, California, and Michigan would have priorities set to review chemicals that have significance on a national or state level. That these programs have not developed a risk number for a chemical does not mean in and of itself that the agencies did not have sufficient information to do so.
5.20 sec. 3.3.4 This section lists five alternatives for deriving unit risk estimates and benchmark ambient concentrations. A hierarchical order for using these approaches would help to minimize uncertainty. (*EPA*)	5.20-31. While the first four specific methodologies have been listed in chronological order, with the most recent methodology listed first, the District does not consider that these should be specified as a hierarchical order. The District would accept a URE or BAC_C derived from any of these listed methodologies.
5.20 sec. 4 The regulation should be changed to show that the RfD be used to derive a BAC only when route-to-route extrapolation can be shown to be appropriate. *(EID)*	5.20-32. The District agrees that certain criteria must be met for using a Reference Dose (RfD) to establish a BAC. The District will add a section that specifies the criteria to be assessed and a requirement that an RfD/ toxicological study based on a non-inhalation route of exposure would not be used to set a BAC_{NC} for a specific TAC unless the District made an affirmative finding that the use of route-to-route extrapolation is appropriate for that TAC.
5.20 sec. 4 Please explain the RIA requirements to justify the inclusion of a noncancer benchmark determination. *(GLI, LGE)*	5.20-33. The RIA will be developed and made available as required by Regulation 1.08.

Section ... Comment ... From	Comment No. District Response
5.20 sec. 4 Rather than establishing these additional approaches in the rules, the District should be required to use the EPA values where available. Where not available, the District should be required to undertake a public notice and comment process in order to establish the BAC_{NC} values for these new chemicals. *(Ford)*	5.20-34. If there is a published RfC in IRIS, then that RfC is used to establish the BAC_{NC}. A California REL, which is based on inhalation, is given a higher place in the hierarchy than an RfD published in IRIS because the RfD is based on a different route of exposure. The District disagrees that a public notice and comment process should be established for any chemical for which there is not an applicable number listed in the EPA's IRIS.
5.20 secs. 4.1 - 4.10 The determination approaches of BAC_{NC} appear to be based on very conservative values. The first mechanism suggested -- equating BAC_{NC} to RfC in $\mu g/m^3$ of a TAC over a 24-hour averaging period established by EPA – may be a reasonable approach to establish a benchmark, but the RfC already has a likely safety factor of at least 300. The other approaches, however, may be inappropriate in determining the BAC_{NC} as each has it own biases and extra safety factors depending on views of the states or researchers generating the values. *(Ford)*	5.20-35. The safety factors account for various areas of uncertainty, and are factors that are commonly used by the scientific community. The District considers these approaches to establishing a BAC_{NC} to be credible and reasonable, and provide an efficient methodology for determining the toxicity of a chemical.
5.20 sec. 4.1 References to RfCs in IRIS in this section note that the units for the BAC_{NC} are $\mu g/m^3$. It should be noted that the units used in IRIS are mg/m^3. (*EPA*)	5.20-36. The District recognizes that an RfC in IRIS may be expressed in units of milligrams/m^3. However, it is a simple conversion to put the RfC in units of micrograms/m^3 and then use the value in micrograms/m^3 in the equations specified in section 4. By doing this, the outcome of the equation will consistently be in units of micrograms/m^3, which will lessen the likelihood that a units mistake will be made in determining environmental acceptability.

Section ... Comment ... From	Comment No. District Response
5.20 secs. 4.1, 4.2 and 4.3 The procedure for setting *chronic* standards based on RfC, REL and RfD requires the determination be made using a 24-hour averaging period. It should be clarified that the average daily (24-hour) exposure would be appropriate, as opposed to the maximum 24-hour exposure as determined in Regulation 5.21. *(EID)*	5.20-37. The District disagrees. The intent is that the BAC_{NC} is the maximum concentration based upon a 24-hour averaging period.
5.20 sec. 4.3 Does this mean that, even though EPA has not published an air standard, the District proposes to set one based on an oral dose standard? *(LGE)* This section states that an inhalation RfC can be extrapolated from an oral RfD, if an inhalation RfC is not available in sources identified in secs. 4.1 and 4.2. This route-to-route extrapolation, while seemingly logical, is not acceptable based on the current EPA risk assessment methodology due to the unique pharmacokinetics following inhalation exposures. *(GLI)*	5.20-38. Yes. The use of animal oral dose studies has been an accepted toxicological practice for many decades. For example, the use of an (oral) RfD as the basis for an acceptable ambient concentration (inhalation) was included in the final *West Louisville Air Toxics Study Risk Assessment* (October 2003, Page 48 Equation 4-2). The District notes that the EPA was a partner in the development of the risk assessment methodology used for the WLATS. However, the District recognizes that certain criteria must be met for using a Reference Dose (RfD) for establishing a BAC. The District will add a section that specifies the criteria to be assessed and a requirement that an RfD/toxicological study based on a non-inhalation route of exposure would not be used to set a BAC_{NC} for a specific TAC unless the District made an affirmative finding that the use of route-to-route extrapolation is appropriate for that TAC.
5.20 Sec. 4.5 The term "ceiling OEL" should be defined. (*EPA*)	5.20-39. The term "ceiling" (as opposed to a time-weighted average) is defined in the ACGIH document referred to in section 4.5.

Section ... Comment ... From	Comment No. District Response
5.20 sec. 4.5 The composite safety factor uses a 30 year estimate for a worker's exposure compared to a 70-year lifetime. However, most people work 40 years. A more appropriate estimate would change the composite safety factor to approximately 80. *(Noveon)*	5.20-40. The 30-year factor is a standard factor used for this purpose.
5.20 Sec. 4.5 This section allows certain OELs to be used to calculate a BAC_{NC} if other sources of data in Sec. 4.1 to 4.4 are not available. The acceptable data sources are the lower of NIOSH and ACGIH threshold limit values ("TLVs") or ceiling levels. The occupational exposure level ("OEL") is divided by a composite safety factor of 100 to account for differences in susceptibility between the healthy, adult worker population and the general population. This safety factor is not adequate to protect public health. We recommend that the safety factor in equation 6 be increased from 100 to a minimum of 1000 and that sources of OEL data be expanded to include German and Swedish OELs. (Explanation) (*Sierra Club*)	5.20-41. The District considers that the composite safety factor is protective of public health. The District considers that the inclusion of only NIOSH and ACGIH occupational exposure levels, that are applicable in the United States, is appropriate. The District is not aware of any State or local toxics programs in the United States that use occupational exposure levels developed in other countries.

Section ... Comment ... From	Comment No. District Response
5.20 secs. 4.6 - 4.10 What is the information source for the 7-day inhalation NOAEL, and other alternative BAC_{NC} calculation methods suggested in these sections? No reference documents are given. Are facilities to use the earlier referenced documents, preferentially in the order given? Can anybody's study be used? *(GLI, LGE)*	5.20-42. Section 4 is structured in a hierarchial progression. Proceeding numerically from the beginning of Section 4, the BAC is established by the first method for which the appropriate data exists. The value such as a NOAEL, LOAEL, LC_{50}, or LD_{50} are derived from animal toxicity studies. A listing of published animal toxicity studies can be found in the Registry of Toxic Effects of Chemical Substances (RTECS) that was originally developed and maintained by the National Institute for Occupational Safety and Health (NIOSH), part of the Centers for Disease Control and Prevention (CDC) in the U.S. Department of Health and Human Services. RTECS is now maintained by MDL Information Systems, Inc., under contract with NIOSH. The District will not restrict the origin of an animal toxicity study to be used as the basis for determining a BAC_{NC} pursuant to the methodologies in Section 4. However, the District reserves the right to review a particular study that was used for that purpose and determine that the study does not establish an acceptable basis for determining a BAC_{NC}.
5.20 secs. 4.8, 4.9 and 4.10 Use of LC_{50} (1 and 4 hour inhalation) and LD_{50} (oral) acute values is inappropriate to develop a $BAC_{NC.}$ Effects under acute conditions may have no correlation with those under repeat-dose conditions. A BAC should not be established if there is no repeat-dose data available, and testing should be sought. The huge aggregate uncertainty factors of 50,000 and 2,000,000 for 4- and 1-hour exposures, respectively, do little to support this approach other than confirm that acute values should not be used. *(EID)*	5.20-43. A company may arrange for other testing to be done to develop data that would be used in the hierarchy before an LC_{50} or LD_{50}. The District notes, however, that the responsibility for this testing would be borne by the company and not the District, and a company deciding to do this would not have a deadline established in Regulation 5.21 delayed because of this decision.

Section ... Comment ... From	Comment No. District Response
5.20 sec. 4.11 A default BAC level should not be established in the absence of data. *(Arkema, EID, GLI)*	5.20-44. The purpose of a default BAC is to establish a level that has a high probability of being protective of public health even though there is no toxicological data available for the specific chemical. The range of options that could be taken run from not allowing that chemical to be emitted until toxicological data have been generated so that a BAC can be derived to the other extreme of ignoring the environmental acceptability of that chemical.

Section ... Comment ... From	Comment No. District Response
5.20 sec. 4.11 The default value of 0.04 µg/m^3 does not appear to be scientifically derived or supported by toxicity literature. What is the basis for it? *(Arkema, EID, GLI)*	5.20-45. The 0.04 µg/m^3 default value was developed in 1981 by the Special Air Advisory Committee (a multi-stakeholder group) convened by the Michigan Air Quality Division (AQD) to develop an approach for evaluating toxic emissions. The level was the 95th percentile level of 10,417 chemical citations in RTECS that any chemical would be environmentally acceptable. In 1995, the AQD re-evaluated the basis of the default value. The Michigan Scientific Advisory Panel (that was appointed pursuant to a requirement in the Michigan air toxics regulations) concluded that there seemed to be no convincing data to change the 0.04 µg/m^3 default level. It was later discovered that there had been an error in that a few chemicals, for which the default value was used, had not been removed from the chemicals analyzed. In 1996, the AQD again revisited this issue, using three different methods. Method 2, which considered the environmentally acceptable level for the noncarcinogenic effects of all chemicals evaluated by the AQD (and appropriately removing those chemicals for which the default value was used) and adjusted these levels to an annual basis, resulted in a 95th percentile level of 0.03 µg/m^3. The District considers that the 0.04 µg/m^3 default level has an acceptable scientific basis and provides a high confidence level that using this default level for the BAC adequately protects public health.
5.20 sec. 4.11 If a BAC_{NC} cannot be determined by one of the methods in 4.01 to 4.10, the facility should not be required to consider non-carcinogenic risk. If a default number must be used, it should be much higher. The majority of BAC_{NC} data is greater than 30 µg/m3. *(GLI)*	5.20-46. The District disagrees that the absence of toxicological data for a specific chemical justifies exempting the emissions of that chemical from a consideration of noncarcinogenic risk. See the previous response for the basis of the 0.04 µg/m^3 default level.

Section ... Comment ... From	Comment No. District Response
5.20 sec. 4.11 The "catch-all" value appears to treat new chemicals, i.e., those that do not have an established RfC or other recognized health effect value, more seriously than those chemicals for which an RfC has been established. And even if the new chemical turns out to be much safer than an existing chemical, its use could be restricted or prohibited under the rules. *(Ford)*	5.20-47. The purpose of the default value in section 4.11 is to provide a mechanism for ensuring that public health would not be threatened if there were no toxicity data available for a specific chemical. If toxicity data later became available and a BAC_{NC} were developed by a different method specified in Section 4, then the BAC_{NC} based upon that other method would be used. Sections 3.11 and 3.12 specify procedures when a BAC is changed.
5.20 sec. 5 This regulation only sets out a procedure to determine BACs for substances that are either carcinogenic or chronically toxic. This section assumes that compliance with the chronic BAC protects the public from acute effects. This is reliably correct only if the chronic BACs apply on a 1-hour basis, which is not proposed. The District should set out a procedure for determining acute BACs and establish corresponding EALs in Reg. 5.21. (*Sierra Club*)	5.20-48. The District agrees that injurious effects to human health could be caused by short-term but significantly increased concentrations of a TAC. In recognition of this, the District has drafted the authority in Section 5 to address, on a case-by-case basis, an acute situation for which the outcome of Section 4 does not provide adequate protection. In reviewing the information sources for determining a BAC for a TAC, the District will make note of information related to concentrations that could be harmful on an acute basis. However, the District does not consider the systematic development of EALs for acute exposure in Regulation 5.21 to be necessary.
5.20 sec. 5 By what criteria will the District make this determination? *(Noveon)*	5.20-49. In reviewing the information sources for determining a BAC for a TAC, the District will make use of information related to concentrations that could be harmful on an acute basis.

Section ... Comment ... From	Comment No. District Response
5.20 sec. 5 Does this give the District the authority to create its own standards after EPA, the NIOSH, or others have not determined what levels are harmful? Does it give the District the authority to change standards already published by EPA and others? *(LGE)*	5.20-50. Establishing a short-term concentration for a TAC does not change the BAC for a TAC with respect to the averaging period identified as applicable for that TAC. The Board has the authority to adopt a regulation to address the acute health impacts of short-term emissions.
5.20 sec. 6 The District should provide a current list of the benchmark ambient concentrations developed pursuant to this regulations, averaging times, and referenced sources, as soon as possible, rather than waiting until after the regulations are in effect. *(LGE, REACT)*	5.20-51. The District has posted this information for the Category 1 and 1A TACs on the District's web site. The District will continue this process for the Category 2 and 3 TACs, but would give priority to a TAC that a Group 1 or 2 stationary source included, or intends to include, in a construction permit application subject to Regulation 5.01 section 4.1.2.
5.20 sec. 6 A source will not be able to trust that the District has the latest, most appropriate BAC on its website. Instead, a source must go directly to the documents listed in secs. 3 and 4 to develop its own BAC. This regulation would be much less burdensome if the District would review the various sources of data and maintain a listing on its website of BAC data that sources can actually use. *(GLI)*	5.20-52. The District will periodically review the IRIS, California, and Michigan information sources and update the District's listing of current BACs on the District's web page. The District will also include, on the District's web site, links to these other information sources.

Section ... Comment ... From	Comment No. District Response
5.21 General Comment The regulation uses three layers of calculation of allowable emissions. (Explanation.) Since summing of risk levels assumes maximum impacts occur at the same receptor at the same time, an unusually high cumulative risk level will be computed, making compliance with the risk limits highly conservative. Increased more costly refined modeling will be required. Tracking of cumulative risk at thousands of receptors county-wide will be inevitable by numerous industries. Unrealistically low allowable emissions for each air toxic may result, since it is assumed risk levels for each are additive. *(GLI)*	5.21-1. The intent of the cumulative risk is not for the maximum risk of one emission point to be added to the maximum risk for a second emission point. The cumulative risk is intended to be the cumulative risk from multiple emission points at a single receptor point. The Group 1 and 2 stationary sources are not required to assess the cumulative risk from other stationary sources.
5.21 General Comment – Compliance Based on some preliminary compliance calculations using Regulation 5.22 methods, very few emission points, let alone full facilities, will be able to meet the goals or standards in Regulation 5.21, and the county will not meet the county-wide risk goal or standard. The potential effect is widespread non-compliance and may resort to selective enforcement while still not meeting the set goals. The result may be public disappointment and decreased movement of new intelligent businesses to Jefferson County due to uncertainty about the ability to comply with such standards. *(GLI)*	5.21-2. Based upon the high level of risk that was monitored in the West Louisville Air Toxics Study (WLATS), and the proximity of the largest sources of specific chemicals to the monitors that recorded the highest concentrations of those chemicals, it is likely that there will be some stationary sources for which modeling of all of the emission points results in a risk greater than $1 \otimes 10^{-6}$. However, the draft regulations do not intend that there be a county-wide risk goal that must be met by summing the maximum risk of each emission point in the county.

Section ... Comment ... From	Comment No. District Response
5.21 General Question – Compliance What are the consequences if a company cannot attain the emission standard? *(Solae)*	5.21-3. As with any emission requirement in the District's regulations, a company has a legal requirement to meet the emission standard. Regulation 5.21 has a built-in process for submitting a compliance plan and then allows for a period of time to effect the measures necessary to comply with the emission standard. And, as with any emission requirement in the District's regulations, the Board has the flexibility and statutory authority to approve a waiver.
5.21 General Comment - Compliance It is difficult to know how a facility will be able to tell when they are in compliance. There is no guarantee that even with the most stringent pollution control technology a facility will meet the one in a million benchmark. The regulation allows for a less stringent standard, but there is no guarantee that the District will approve a less stringent standard and there is no clear criteria for how a company would qualify for a different standard. (*KPC)*	5.21-4. Compliance with the goals and standards in sections 2.2 and 2.5 would be determined by using the procedures specified in Regulation 5.21 (which also reference Regulations 5.20 and 5.22). The District would not unreasonably withhold approval of a modification of the environmental acceptability (EA) goals up to the level of the applicable EA standards. The procedure for modifying the EA goals specifies that the District shall consider, among other factors, whether, and the extent to which, the process or process equipment does, or will, reflect the application of the best available technology for toxics. The District will add land use and demographics as other factors to consider.
5.21 General Comment The regulations use such overly conservative risk exposure presumptions that they will sweep far more sources into the program than actually pose risks. (Example and explanation given.) *(GE)*	5.21-5. The STAR Program as drafted proposes a $1 \otimes 10^{-6}$ goal at the fenceline, a procedure that is widely accepted and used in many state risk-based toxics programs. The EPA uses lifetime (70-year) exposure when establishing a unit risk estimate (URE) for a specific chemical, and then uses a modeled maximum annual average concentration to compare to the URE as the basis for determining the resulting risk.

Section ... Comment ... From	Comment No. District Response
5.21 General Comment This proposed regulation does not take into consideration actual population exposure. The District should provide flexibility to consider actual population exposure levels in instances where the regulation might otherwise require controls. As written, the regulation may inappropriately require stringent emission controls to industry groups having little impact on population exposure and no controls on source categories having the most human risk. *(GLI)*	5.21-6. The District will consider such information in determinating whether to approve a request to modify an EA goal. The risk from the emissions of other source categories will be analyzed and future regulations and emission reduction programs will be drafted as appropriate.
5.21 General Comment The District should adopt a risk range, like EPA's for the benzene NESHAP program, and work with daily average exposure values at locations of actual potential for exposure to create a more reasonable and realistic assessment methodology. As written, there are too many layers of conservatism for the assessment results to be practical (explanation given). *(EID)*	5.21-7. The District disagrees that there should be a risk range that spans two orders of magnitude.
5.21 General Comment The procedure used to calculate EALs only considers direct exposure by the inhalation route. Communities can be exposed by direct air emissions via other routes and mechanisms that are not considered, including dermal contact, ingestion, and bioaccumulation. Mercury, for example, bioaccumulates. These other routes should be considered in calculating EALs for all TACs. (*Sierra Club*)	5.21-8. The District agrees and will add a provision to section 3.10 that authorizes the Board to require, after providing an opportunity for public review and comment, additional reductions of those toxic air contaminants from the contributing processes and process equipment if there is human exposure from routes of exposure other than direct inhalation.

Section ... Comment ... From	Comment No. District Response
5.21 General Comment If the maximum concentrations in equations 1-6 are based on modeling by the individual facilities, how will one facility have access to the results of the other facilities' efforts in order to determine that the standards in §2.8.1 and 2.8.2 are met? If a facility only has access to its own modeling, there will remain some question concerning the cumulative impact of several facilities until a comprehensive modeling of the community has been completed. (*EPA*)	5.21-9. Regulation 5.21 does not require a Group 1 or 2 stationary source to determine whether compliance with the goals in section 2.8 are met. The District, alone and in conjunction with EPA Region 4, will evaluate specific instances where the District has information that suggests that the goals in section 2.8 might not be met. If the District determines that the goals in section 2.8 would be exceeded, then the District would initiate a public process by which the Board would require reductions (see section 3.8). The District would make available the inputs and results of any modeling that is used to form the basis of this determination.
5.21 General Comment Is there a compliance schedule for TACs that are not Category 1 or 1A? (*EPA*)	5.21-10. The STAR Program as drafted does not require a determination of compliance with EA levels for Category 2 or 3 TACs from existing processes and process equipment. For existing processes and process equipment, the focus of the STAR Program as drafted is on Category 1 and 1A TACs.
5.21 General Comment Using an EPA risk goal of $1x10^{-6}$ while allowing for flexibility if a business employs a best available technology if the goal cannot be met is reasonable. *(GLI)*	5.21-11. No comment is needed.

Section ... Comment ... From	Comment No. District Response
5.21 General Comment An appropriate residual risk rule to use as a model would be the Hazard Organic NESHAP, now being developed for the chemical industry. Several companies operating in Jefferson County operate facilities that will become subject to this standard in the next few months. *(Arkema)*	5.21-12. The District disagrees that the Hazard Organic NESHAP, now being developed for the chemical industry, is an appropriate residual risk rule to use as a model for the STAR Program. The District does not consider the EPA's allowed risk policy to be sufficiently protective of public health. In addition, EPA has recently advised the District that it has halted work on the Residual Risk Project for polymers and resins I.
5.21 General Comment Sources subject to this regulation tend to occur in clusters. Thus, cumulative emissions from more than one nearby facility may pose an unacceptable health risk to nearby communities. This regulation should be revised to consider cumulative risk, including a grant of authority to the District to require emission reductions below those required to meet single source EALs. Cumulative risk should be less than the EALs in sec. 2.8. (*Sierra Club*)	5.21-13. Section 3.8 creates a mechanism to address the cumulative risk concern raised in this comment. The goals in section 2.8 are considered to be protective of human health.
5.21, 5.22 General Comment Determining an EA value for a TAC is a difficult prospect. The approaches used in the draft rules (1 to 10 in a million risk for known or suspected carcinogens or 0.2 to 1 of the "hazard quotient") start with overly conservative estimates, ones that already have several safety factors built in. Using ultra-conservative to very-conservative mathematical and modeling approaches (e.g., SCREEN3 and ISC3) to adjust the theoretical concentration impacts of "maximum" emission rates that may occur further exaggerates these safety margins. *(Ford)*	5.21-14. The requirement to demonstrate environmental acceptability in Regulation 5.21, which applies only to certain industrial sources, is only one part of the larger STAR Program, the goal of which is to protect public health and welfare. Additional exposure to toxic air contaminants will occur from emissions of smaller industrial sources, area sources, non-road mobile sources, and mobile sources as well as exposure to background levels.

Section ... Comment ... From	Comment No. District Response
5.21 General Comment – the EALs The EALs are too conservative. Explanations are given. • Targeting less than $1x10^{-6}$ cancer risk level, especially in heavily industrial areas, is unrealistic, overprotective, and unnecessarily costly. • The proposed EALs are much more stringent than, for example, Ohio's. (Examples given) • The imposition of unnecessarily stringent goals or standards may significantly increase the cost to local businesses and discourage existing or new business development. *(EID, GLI)*	5.21-15. The $1 \otimes 10^{-6}$ risk level for a single carcinogen from a single process or process equipment is the lowest risk level required in the STAR Program. The District recognizes that using a risk-based program, with the benchmark risk for a single carcinogen from a single process or process equipment, results in a more stringent program than, for example, the Ohio program that sets the benchmark for carcinogens as well as noncarcinogens at the occupational health threshold limit value (TLV) divided by 42. Reducing the risk from exposure to toxic air pollution, while potentially having a cost to local businesses, could be considered beneficial in attracting new business development because of the enhanced quality of life.
5.21 General Comments – the EALs The EALs of $1x10^{-6}$ for cancer risk and 1.0 for noncancer health effects represent appropriate targets and should not be weakened because: • Exposure of the public is intentional, but the public is unconsenting; • There are significant uncertainties concerning human response to multiple chemical exposure; • To protect the most vulnerable among the population; and • There is significant uncertainty in the identification of "safe" levels of exposure for many thousands of chemicals. *(KRC, WH)*	5.21-16. No comment is needed.

Section ... Comment ... From	Comment No. District Response
5.21 General Comment – the EALs This regulation establishes EALs for the sum of all carcinogens (EAL_C) based on risk in secs. 2.2.3, 2.5.3, and 2.8.2, but fails to establish a parallel EAL for the sum of all noncarcinogens. Exposed parties inhale all noncarcinogens and carcinogens simultaneously, not on a compound-by-compound basis. Thus, an EAL_{NC} based on the hazard quotient should be established in Secs. 2.2.3, 2.5.3, and 2.8.2 for the sum of all acute noncarcinogens emitted by a source. This value should be no greater than 1.0. (*Sierra Club*)	5.21-17. Unlike the treatment of the additive risk of carcinogens, the hazard quotients of individual TACs are not proposed to be added because different target organs may be affected by different TACs, and the risk of an adverse effect would only be additive for TACs that would affect the same target organ. While, in theory, hazard quotients for TACs that affect the same target organ could be added, it is not certain that the health effects data would be available for all of the affected TACs, and, for the initial STAR Program, such an approach was considered to be too complex for effective implementation.
5.21 General Question – Goals vs. Standards What is the difference between a goal and a standard? *(Borden, EPA, GLI)*	5.21-18. The goals established in sections 2.2 and 2.5 have a process established in sections 2.3 and 2.6, respectively, that allows the District to approve an EA goal to be exceeded, provided that compliance with the applicable standards in sections 2.5.2 and 2.5.3 are met. There is no process established in Regulation 5.21 to allow a company to exceed a standard. Approval to exceed a standard could be granted only by the Board through its authority to issue variances.
5.21 General Comment – Goals vs. Standards Although this regulation implies that there is a difference between a goal and a standard, sources would have to petition for a variance if they couldn't meet the goals. Since there is no administrative mechanism in place for variances, the administrative effect is the same as if the goal were a standard. *(GLI)*	5.21-19. The District disagrees that the administrative effect is the same except to the extent that both a modification of an EA goal approved by the District and a variance approved by the Board would involve an opportunity for public review and comment.

Section ... Comment ... From	Comment No. District Response
5.21 General Comment – Scope of covered sources Only Group 1 and 2 stationary sources must determine whether the allowed emissions from all processes and process equipment comply with the EA levels in Secs. 2.5.1-2.5.3. This and other regulations in the STAR program do not require that sources not in Groups 1 or 2 demonstrate compliance. Further, this and other regulations in the STAR program do not require that EALs in Reg. 5.21, sec. 2.2 be complied with. Sec. 3 should be modified to require that all sources that emit TACs at levels that would exceed EALs in Secs. 2.2, 2.5 and 2.8 determine whether allowed emissions comply with the EALs. (*Sierra Club*)	5.21-20. The STAR Program focuses on the Group 1 and 2 stationary sources because they account for more than 97% of the reported HAP and ammonia emissions from stationary sources. Additionally, requiring minor stationary sources and area sources to demonstrate compliance with the EA levels would result in a significant workload for these smaller companies as well as for the District to help these smaller companies develop the information required by Regulation 1.06 Section 4 (the enhanced emissions data for toxic air contaminants) and perform the demonstration required in Regulation 5.21. The District has, however, included in Regulation 1.06 Section 4 and Regulation 5.21 section 3.13 the authority to require specific companies to provide this enhanced emissions data and perform this environmental acceptability demonstration if the District determines that the concentration of a TAC is, or may be, greater than the EA goal in section 2.8.
5.21 General Question – Scope of Covered Sources The regulations provide that the District can place additional restrictions on stationary sources if the community cannot meet the 1 in a million goal. In the case of 1,3-butadiene, even the control sites in the West Louisville Task Force study did not meet the standard set forth in this regulation. EPA web sites indicate that no US city measuring this chemical can meet this goal, even those without users of this chemical. Please explain the rationale behind only regulating stationary sources through this regulatory package. *(GLI)*	5.21-21. The STAR Program does not establish a $1 \otimes 10^{-6}$ ambient standard to be met by the community, that is, considering emissions from area sources, mobile sources, and nonroad sources as well as background concentrations. The risk from the emissions of other source categories will be analyzed and future regulations and emission reduction programs will be drafted as appropriate.

Section ... Comment ... From	Comment No. District Response
5.21 General Questions – Risk Levels and Hazard Indices The District has proposed the use of a cancer risk limit of $1x10^{-6}$ and a hazard index (HI) of between 0.1 and 10. These limits are not consistent with what EPA is now determining constitutes an Ample Margin of Safety (AMOS) under 40 CFR 61 NESHAP standards or the recent 40 CFR 63 residual risk standards. Therefore, we request that the District conduct an analysis to demonstrate what AMOS levels are appropriate, given that EPA's definitions in Section 112(f) of the Clean Air Act that require the AMOS be set between $1 x10^{-4}$ and $1 x10^{-6}$. We also recommend that the District consult with EPA concerning where AMOS would be set for non-carcinogens, especially since EPA is currently considering HI between 1 and 20. *(Arkema)*	5.21-22. The District has drafted a cancer risk goal of $1 \otimes 10^{-6}$ and, for noncarcinogenic effects, goals and standards that range from a Hazard Quotient of 0.2 to 1.0. The District notes that the term "Hazard Index" is used when combining the Hazard Quotient of different chemicals but the draft STAR Program does not use a Hazard Index. The total cumulative carcinogen risk goal of $10 \otimes 10^{-6}$ ($1 \otimes 10^{-5}$) applies to the risk only from point source emissions and does not include the risk from area, mobile, or nonroad mobile source emissions, nor does this risk goal include the risk from identified background concentrations. A Hazard Quotient of 1.0 represents the concentration above which adverse health effects could be expected. Thus, the concentration of a chemical at a level representative of a Hazard Quotient greater than 1.0 could cause adverse health effects.
5.21 General Question – Risk Levels and Hazard Indices The District has proposed the use of a cancer risk limit of $1x10^{-6}$ and a hazard index (HI) of between 0.1 and 10. Please provide a justification for why these limits were set and provide a technical and economical justification of each value provided for Title V and/or FEDOOP facilities. *(Arkema)*	5.21-23. Many mature risk-based toxics programs around the country, including the Kentucky program, use a risk of $1 \otimes 10^{-6}$ as a goal when considering a single chemical from a single process. Based upon this experience, the District considers this risk level to be a reasonable goal. A Hazard Quotient of 1.0 represents the concentration above which adverse health effects could be expected. A regulatory impact assessment will be developed and made available as required by Regulation 1.08.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 1.1 – T-BAT Regarding T-BAT, the District should set organic and inorganic cost targets to clarify when a control technology is required. *(Arkema)*	5.21-24. Sections 2.3 and 2.6 do not require the application of T-BAT, but provide for the consideration of T-BAT by the District as a factor in its determination of whether to approve a request to modify an EA goal..
5.21 sec. 1.1 – T-BAT What are the credentials of District staff that qualify them to determine and define T-BAT, taking into account energy, environmental and economic impacts and health and welfare (as defined in these regulations) benefits? *(LGE)*	5.21-25. The District, like other state and local air pollution control agencies, makes determinations such as best available control technology (BACT), lowest achievable emission rate (LAER), reasonably available control technology (RACT), and maximum achievable control technology (MACT), which consider many of these factors. The District will use its experience and expertise in making T-BAT determinations.
5.21 sec. 1.1 (and 2.3.2) Attempting to establish best available technology for toxics (T-BAT) based on welfare benefits is a difficult, if not impossible task. *(Ford)*	5.21-26. Assessing effects on welfare, both costs and benefits, has been required in many environmental programs under the Clean Air Act and other laws.
5.21 sec. 1.1 – T-BAT The definition of T-BAT in sec. 1.1 should be modified to exclude the consideration of economic factors in cases where emissions exceed the EALs in Secs. 2.2, 2.5, or 2.8. (*ALA, Sierra Club)*	5.21-27. Economic impacts are one of many factors taken into account when determining T-BAT. Also taken into account are environmental impacts and health and welfare benefits, which would include consideration of emissions exceeding one or more of the environmental acceptability goals and standards.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 1.1 – T-BAT Explain the process to be used to determine T-BAT including all the RIA information. *(LGE)*	5.21-28. The District would use a process similar to the "top down" process that has been identified by the EPA for determining best available control technology, taking into account the factors identified in this definition. Sections 2.3 and 2.6 do not require the application of T-BAT, therefore the RIA information is not required.
5.21 secs. 1.1 and 2.3.2 – T-BAT Will T-BAT for new sources differ from that for existing sources? *(Arkema)*	5.21-29. Sections 2.3 and 2.6 do not require the application of T-BAT. The economic impact of some of the factors to be considered, such as alternative process and process equipment design characteristics, would likely be different for a new source than for an existing source because such characteristics could be included in the design of the new source before the equipment is built and installed while making this change for an existing source may require significant modification to the existing equipment. However, the impacts of other factors, such as the opportunity for incorporating a pollution prevention measure, such as the use of an alternative material that contains less toxic compounds, may not be different for existing and new sources.
5.21 sec. 1.1 and 2.3.2 – T-BAT How will the concept of T-BAT be used in applying these regulations? • The definition of T-BAT is vague. • The regulation doesn't specifically require T-BAT to be used in any particular circumstance. • If a goal is exceeded despite the use of T-BAT, is this acceptable? • Is a source always going to be required to implement T-BAT if a goal would otherwise be exceeded? *(GLI)*	5.21-30. Sections 2.3 and 2.6 do not require the application of T-BAT. The definition of T-BAT is similar to the federal definition of "best available control technology." Whether, and the extent to which, the emissions reflect the application of T-BAT is not the only factor that the District would consider in making a determination whether to approve a request for modifying an EA goal.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 1.3 This section refers the reader to Regulation 5.01, §1.10. There is no §1.10 in that regulation. (*EPA*)	5.21-31. This cross reference should be to section 1.9.
5.21 sec. 1.4 Explain the scientific foundation for the definition of HQ and other evaluated opinions and why this quotient was selected. *(LGE)*	5.21-32. A hazard quotient of 1.0 was selected because it represents the concentration that is likely to be without an appreciable risk of chronic adverse health effects.
5.21 sec. 1.6 Define anthropogenic emissions inventory and the credentials of District staff to demonstrate the ability to thoroughly evaluate the cause and effects of such emissions inventories that may adversely affect human health, including all the RIA information. *(LGE)*	5.21-33. Anthropogenic emissions are the emissions from point, area, nonroad mobile, and mobile sources. The complete emissions inventories that have been developed by the District since 1990, as required by the Clean Air Act, also include biogenic emissions. The definition of "source sector" and the included descriptions of point, area, mobile, and nonroad mobile sources do not establish any requirements, therefore no RIA information is required.
5.21 sec. 2 Please clarify how to establish compliance with the proposed BACs. The equations in Section 2 assume that there are allowable emissions with which to calculate maximum concentrations. This is not the case for many of the emission points regulated by MACT technology standards and LDAR. Many of the current District regulations do not contain a set, allowable emissions rate for emission points as they are technology-based standards or a floating allowable emissions rate based on throughputs. *(GLI)*	5.21-34. If allowed emission rates are not established, then the potential emissions of that TAC would be used. In recognition that using the potential emissions could result in concentrations greater than the goals and standards in Regulation 5.21, section 3.3 allows the owner or operator to request a new or revised permit condition to reduce the allowable emissions for that TAC, which would then be used in demonstrating compliance.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 2 The six equations in this section each define the EAL as a dependent variable, the quotient of an ambient concentration and a benchmark ambient concentration. The EAL is not really the result of this calculation. The EAL is the goal or standard that has been established through the regulations. These equations result in calculated values that will subsequently be used in comparisons with the EALs. The value of this section would be enhanced if the rationale for the goals and standards were presented. In addition, toxicity values that involve two significant digits may, in some cases, stretch the capabilities of the models and the unit risk values. (*EPA*)	5.21-35. The District acknowledges that using the same term for the risk calculated by using Equations 1 to 6 of section 2.2 and the environmental acceptability levels that are the established goals (and standards in other sections) is not precise. The District will change the nomenclature to clarify the difference between the calculated risks and the goals and standards. Most of the unit risk values are expressed to a precision of two places, for example, the URE for acrylonitrile is listed in IRIS as 6.8E-05 (per $\mu g/m^3$). Similarly, the identified models derive concentrations with at least two digits of precision. Therefore, the District considers the use of two digits in the goals and standards acceptable.
5.21 sec. 2 Is the EAL an ambient concentration (sec. 1.2), a risk level (sec. 2.2) or a ratio of concentrations (equations 1 and 2)? *(EID)*	5.21-36. The environmental acceptability levels (EA levels) are the goals and standards established in sections 2.2, 2.5, and 2.8. The District acknowledges that using the same term for the risk calculated by using Equations 1 to 6 of section 2.2 and the EA levels is not precise. The District will change the nomenclature to clarify the difference between the calculated risks and the goals and standards.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 2 What is meant by the EAL risk and the EAL HQ, and what is the rationale for the ones in this table? *(EID)*	5.21-37. The term EAL_C Risk is the established risk goal or standard (as specified in the tables in sections 2.2, 2.5, and 2.8). The District notes that EAL_C Risk, as used in these tables, is meant to be expressed in units of 10^{-6}, so that the numerical result of Equations 1 and 2 in section 2.2 and Equation 5 in section 2.8 is the risk in one million. A footnote will be added to these tables to clarify this. The term EAL_{NC} is the established noncancer risk goal or standard (as specified in the tables in sections 2.2, 2.5, and 2.8) and is expressed as the Hazard Quotient.
5.21 secs. 2 and 3 The conservatism of these regulations is exacerbated by the inappropriate and technically unsound requirement to sum the effects of various chemicals and risks. While some substances may have similar pathways and effects that toxicologists, health and medical professionals might be able to agree upon, it should not be the default determination that all substances exhibit additive effects. *(Ford)*	5.21-38. Regulation 5.21 does not add the Hazard Quotients from different TACs together for compliance with a Hazard Index. The goals and standards for chronic noncancer risks apply to only individual TACs. With respect to carcinogens, the District considers the addition of the cancer risks to appropriately reflect the total risk.

Section ... Comment ... From	Comment No. District Response
5.21 secs. 2-4 The regulations do not address existing toxics regulations. Please address the conflicts between: • an ASL and BAC allowable under the new regulation. • the TAL allowable emissions rate and benchmark emission limits. • the RACT/BACT and T-BAT determinations. *(GLI)*	5.21-39. Both Regulation 5.11 and 5.12 have a drafted new section *Savings Clause* that states: "Any emission standard that had been established pursuant to this regulation shall remain in effect until replaced by an emission standard established pursuant to Regulation 5.21 *Environmental Acceptability for Toxic Air Contaminants.*" When an emission standard for a TAC is established pursuant to Regulation 5.21, any existing emission standards established pursuant to Regulation 5.11 or 5.12 will be removed. No new emission standard will be established pursuant to Regulation 5.11 or 5.12 after the adoption of Regulation 5.21. Thus, there is no conflict between the existing toxic air pollutant (TAP) program and the STAR Program. Sections 2.3 and 2.6 do not require the application of T-BAT. However, the determination of whether, and the extent to which, the allowed emissions from a process or process equipment reflect the application of T-BAT, is independent of any RACT or BACT determination made in the past. These three technology standards are components of three different programs that do not necessarily result in identical determinations.
5.21 sec. 2.1 This applies to all existing businesses that need to modify their operations, and affects all companies wanting to expand or locate in Louisville. This is much greater than the 173 companies that would have to pay the additional fees that the District has initially identified. Companies considering expanding or locating in Louisville will weigh the excess costs due to the bureaucratic excesses that these regulations would cause. *(GLI)*	5.21-40. The applicability of section 2.1 will be clarified. The intent is that section 2.2 would apply to Group 1 and 2 stationary sources for Category 1 and 1A TACs and for Category 2 and 3 TACs that are approved pursuant to section 3.1.2.1. However, the District will reserve the authority to require environmental acceptability of any TAC from any stationary source undergoing a construction permit application review if the District determines that the general duty clause of Regulation 5.01 Section 3 would not be met.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 2.2 The EALnc of an HQ of .2, rather than the EPA HQ of 1, is not reasonable. *(GLI)*	5.21-41. An HQ of 1.0 is the level above which adverse health effects could be expected. The purpose of establishing a goal of less than an HQ of 1.0 is to not allow the emission of a TAC from a single process or process equipment to have an ambient concentration equal to the ambient goal established in section 2.8.
5.21 sec. 2.2 For new sources, does the HQ value mean that acceptable levels of air contaminants are to be only a fraction of the level at which they are harmful (e.g. 20% or 38% of the harmful level)? How is the "goal" enforced or used? *(LGE)*	5.21-42. Yes, see the above explanation. The goals established in section 2.2 are enforceable, just as any other regulation requirement, through establishing a permit condition that, in this case, would contain an emission standard necessary to comply with the goal. However, the goals established in section 2.2 have a process established in section 2.3 that allows the District to approve an EA goal to be exceeded, provided that compliance with the applicable standards in sections 2.5.2 and 2.5.3 would be met.
5.21 sec. 2.2.1 Choosing a risk level of $1x10^{-6}$ (and a HQ of .2) is a policy decision that bears revisiting. EPA uses a risk range of $1x10^{-4}$ to $1x10^{-6}$ and considers population risk and economic factors. *(EID, Solae)*	5.21-43. The District disagrees that there should be a risk range that spans two orders of magnitude. The District does not consider the EPA's allowed risk policy to be sufficiently protective of public health.

Section ... Comment ... From	Comment No. District Response
5.21 secs. 2.2.1, 2.2.3, and 2.5.3 Please explain the choice of risk levels in the tiered single point-single pollutant, plant-wide and county-wide system of 1, 3.7 [sic] and 7.5 $x10^{-6}$. *(GLI)*	5.21-44. The starting point in the District's consideration of acceptable risk was the goal of $1 \otimes 10^{-6}$ for a single TAC from a single process that has been used for many years in many of the risk-based toxics programs around the country. The end point for cumulative risk at a single point from industrial sources is proposed as $10 \otimes 10^{-6}$ which is $1 \otimes 10^{-5}$, one order of magnitude greater than the traditional $1 \otimes 10^{-6}$. In recognition that there are instances of two or more stationary sources that emit carcinogens that are located close to each other, the District proposed an individual stationary source risk cap of 75% of the ambient goal, or $7.5 \otimes 10^{-6}$. If the level of the individual stationary source risk cap were to be increased above 75%, then there would be a greater likelihood that additional reductions would ultimately be required of many of the stationary sources so that the $10 \otimes 10^{-6}$ ambient goal would be achieved. If the level of the individual stationary source risk cap were to be decreased below 75%, then there would be a smaller likelihood that the $10 \otimes 10^{-6}$ ambient goal would be exceeded, but the requirements for each individual stationary source would be more stringent. The District considered that the 75% level was an appropriate balance between these two outcomes. Finally, the District proposed a goal of restricting the risk from new and modified processes and process equipment to one-half of the $7.5 \otimes 10^{-6}$ individual stationary source ambient standard ($3.8 \otimes 10^{-6}$), in recognition that it is generally more efficient to design a process or process equipment in a manner to minimize emissions than to retrofit an existing process or process equipment to reduce emissions.

Section ... Comment ... From	Comment No. District Response
5.21 secs. 2.2.3, 2.5.3, and 2.8.2 Please give an example of how the EALc Risk will be calculated for all TACs. *(LGE)*	5.21-45. The risk goal or standard is met when the sum of the maximum risks at a single point is equal to or less than the goal or the standard. The District has agreed to work with an ad hoc committee to prepare examples of how the modeling procedures are implemented and how the results are used in Regulation 5.21 to demonstrate compliance with the EA goals and standards.
5.21 sec. 2.3 This section should be modified to allow relaxing sec. 2.2 goals only if the subject process(es) use T-BAT. The factors that may be considered in waiving Sec. 2.2 requirements when T-BAT is used should be identified. (*ALA, Sierra Club*)	5.21-46. The District considers it appropriate to consider the implementation of T-BAT in determining whether to approve a request for a modification to an environmental acceptability goal in section 2.2, but not to require T-BAT. The District will add land use and demographics as additional specific factors to consider.
5.21 secs. 2.3 and 2.6 The language allowing modification of EA goals has too much "wiggle room." The District will be bombarded with requests to exceed the $1x10^{-6}$ risk level. *(ALA)*	5.21-47. The District considers the flexibility provided to modify an EA goal to be appropriate. However, the District's authority to approve a modification of an EA goal is capped by the EA standards in sections 2.5.2 and 2.5.3.
5.21 sec. 2.3.2 This item notes factors that the District may consider in deciding whether to allow a modification of the EA goals. It should specify what criteria the District will use in considering such modifications. (*EPA*)	5.21-48. The District considers that it is appropriate to retain some flexibility in determining the factors that should be considered in reviewing a request to modify an EA goal. However, the District will add land use and demographics as additional specific factors to consider.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 2.4.1 This item states that the goals in §2.5.1 apply to *all* existing processes and process equipment. Is this a misstatement? §2.5.1 and footnote 2 (page 5.21-2) state that 2.5.1 applies to risk from an individual TAC from an *individual* process. (*EPA*)	5.21-49. The applicability of section 2.4 will be clarified by modifying the language in section 2.4. The intent is that section 2.5.1 would apply to Group 1 and 2 stationary sources for Category 1 and 1A TACs from existing processes and process equipment; sections 2.5.2 and 2.5.3 would apply to Group 1 and 2 stationary sources for Category 1 and 1A TACs from existing processes and process equipment as well as Category 1, 1A, 2, and 3 TACs from new processes and process equipment. However, the District will reserve the authority to require a demonstration of the environmental acceptability of any TAC from any stationary source if the District determines that the general duty clause of Regulation 5.01 Section 3 is not be met.
5.21 sec. 2.5.1 For existing sources, does the HQ value mean the District is setting the "goal" at only 20% of the level considered harmful? How is the "goal" enforced or used? *(LGE)*	5.21-50. Yes. The goals established in section 2.5.1 are enforceable, just as any other regulation requirement, through establishing a permit condition that, in this case, would contain an emission standard necessary to comply with the goal. However, there is a process established in section 2.6 that allows the District to approve an EA goal to be exceeded, provided that compliance with the applicable standards in sections 2.5.2 and 2.5.3 would be met.
5.21 sec. 2.5.2 Does the HQ value mean that the District is effectively setting the standard more stringent than published medical studies (e.g. at 75% of standards)? *(LGE)*	5.21-51. The standard in section 2.5.2, that would apply to the processes and process equipment at a single stationary source, is 75% of the Hazard Quotient for a TAC. However, the ambient goal in section 2.8.1, that would apply to the combined concentration of a TAC at a single point from all permitted stationary sources, is 100% of the Hazard Quotient for a TAC.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 2.5.3 We strongly support the proposed upper limit variance of $7.5x10^{-6}$, which could be granted by the District staff, with the provision that any request to exceed that limitation would have to be approved by the Board. *(ALA)*	5.21-52. No response is needed.
5.21 sec. 2.6 Will the District and/or Board consider a modification to the EA standards of 2.5.2 and 2.5.3? *(GLI)*	5.21-53. Regulation 5.21 as drafted does not include an administrative provision for approving a modification to the EA standards of section 2.5.2 or 2.5.3. KRS Chapter 77 authorizes the Board to grant a variance of a standard established in a District regulation.
5.21 sec. 2.6 This section should be modified to allow relaxing sec. 2.5 goals only if the subject process(es) use T-BAT. The factors that may be considered in waiving these requirements should be identified. (*Sierra Club*)	5.21-54. The District considers it appropriate to consider the implementation of T-BAT in determining whether to approve a request for a modification to an environmental acceptability goal in section 2.5, but not to require T-BAT. The District will add land use and demographics as additional specific factors to consider.
5.21 sec. 2.8 Equations 5 and 6 do not seem to recognize that the maximum concentrations from different sources will almost always occur at different geographic locations. What was the rationale for the proposed treatment of the maximum impacts of all sources from all facilities in the county added cumulatively? *(GLI, LGE)*	5.21-55. The intent of the ambient goals in section 2.8 and determined by using Equations 5 and 6 was to determine compliance using the maximum concentration at a single point, not the sum of the maximum concentrations of all emissions in Jefferson County regardless of where the maximum impact point occurred. The District will revise the language to make this intent clear.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 2.8 If this section allows the District to require further reductions from individual sources based on the countywide goal, there needs to be a schedule or deadline for the District to evaluate countywide risks and determine appropriate action. *(GLI)*	5.21-56. As explained in the response to Comment No. 5.21-54, the ambient goals in section 2.8 are not intended to be the sum of all maximum impacts in Jefferson County regardless of where the maximum impact occurs. The District will perform modeling to determine the combined impacts from various stationary sources in the same general area where the District has reason to have concern that the ambient goal is likely to be exceeded. The enhanced emissions data for toxic air contaminants, as required in Regulation 1.06 Section 4, will not be submitted on the same schedule. The authority provided the Board in section 3.8 to require additional reductions from stationary sources is premised on a determination by the District. Until the District makes that determination, section 3.8 does not require any action to occur by a stationary source. The District does not consider it appropriate to establish a schedule and deadline for an evaluation of the entire county.
5.21 sec. 2.8 If the intent of this section is to limit risks from all permitted stationary sources, then the wording of this section might be better, "The EA standards for toxic air contaminants applicable to all permitted stationary sources collectively..." (*EPA*)	5.21-57. The District agrees that the language does not clearly convey the intent of the ambient goals in section 2.8 and will revise the language to make this intent clear.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 2.8 If a facility has already implemented (or is in the process of implementing) District-approved controls in response to an exceedance of a site-specific EAL, does this section allow the District to require more reductions based on the countywide goal? What is the rationale for this? *(GLI)*	5.21-58. Yes, with the clarification discussed in the response to Comment No. 5.21-54 regarding the intent of the ambient goals in section 2.8. This is similar to the situation that could exist for attainment of a national ambient air quality standard (NAAQS). For instance, if a source category-specific RACT regulation is promulgated, but it is later determined that the implementation of the RACT requirements will not be sufficient to attain compliance with the NAAQS, then additional reductions may, after a process for public review and comment, be required.
5.21 sec. 2.8.2 As written, this could never be met. This would require all sources of any cancer-causing TAC to cease operation, as the standard of $10x10^{-6}$ will always be exceeded. *(GLI)*	5.21-59. The District acknowledges that the language in section 2.8 does not clearly convey the intent of the ambient goals in section 2.8 and will revise the language to make this intent clear. Based on the intent of the ambient goal in sections 2.8, the District does not expect the outcome that was suggested by this comment.
5.21 sec. 2.8.2 This section establishes an EA standard of $10x10^{-6}$ based on the "sum of the cancer risks from all individual TACs from all applicable individual stationary sources." If a source may petition for an EA standard of $7.5x10^{-6}$, how will the District allocate the remaining county-wide risk of $2.5x10^{-6}$? *(FBT)*	5.21-60. To clarify, an individual stationary source does not need to petition for an EA standard of $7.5x10^{-6}$; this is the EA standard that applies to each stationary source pursuant to section 2.5.3. It is only if the District determines that the combined risk at a single point from several stationary sources exceeds the $10x10^{-6}$ ambient goal that the Board's authority as drafted in section 3.8 would be applicable. See the response to Comment No. 5.21-66. for an explanation of the proposed change to section 3.8

Section ... Comment ... From	Comment No. District Response
5.21 sec. 3 This section appears to only require demonstration of compliance once, at dates varying according to the type of source and ranging from December 31, 2005 to June 30, 2008. This section should be modified to require subsequent verification if allowed emissions increase or if actual emissions increase and the source was granted an exception under sec. 3.3 and otherwise, every five years. (*Sierra Club*)	5.21-61. Compliance with the EA goals and standards is based on allowed emissions. Allowed emissions would not be increased unless the higher emission rate was demonstrated to comply with these requirements. Title V and FEDOOP stationary sources are required to report instances of noncompliance every six months to the District.
5.21 sec. 3 When permit modifications are required, the regulations should require emission reductions during the interim while the permit is being modified. Companies should not be allowed to delay compliance while a lengthy permit modification process takes place. *(REACT)*	5.21-62. District regulations require the issuance of a construction permit before construction on a new or modified process or process equipment is authorized. However, the District will give priority to processing construction permit applications for changes to processes and process equipment that are needed to comply with more stringent emission standards pursuant to the STAR Program.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 3.1 This item says that for permitted sources, allowed emissions from all processes must comply with the EA levels in §2.5.1. However, §2.5.1 refers to individual processes. Additionally, one could say that *allowed* emissions comply with §2.5.1 by definition. Perhaps the wording should say that all emissions must comply... (*EPA*)	5.21-63. The District intends that the owner or operator demonstrate whether allowed emissions of the specified TACs from all processes and process equipment at the specified stationary sources comply with the goals and standards in section 2.5. However, as specified, section 2.5.1 applies to individual processes and process equipment, thus the requirement is that the maximum ambient concentration based on the allowed emissions be compared to the goals individually. The standards in sections 2.5.2 and 2.5.3 apply to the maximum combined concentration of all processes and process equipment located at a stationary source, with the section 2.5.2 standard considering an individual TAC, and the 2.5.3 standard considering the cumulative risk from all carcinogens.
5.21 sec. 3.1.1.2 This section provides that Group 1s must demonstrate compliance with EA levels for Cat. 1A TACs by 6-30-06. This compliance date should be extended so that it occurs after the requirement to submit the enhanced emissions data in 1.06 sec. 4.2.1.2. The information in the enhanced emission statement is beneficial for completing an accurate EA level evaluation and provides many of the dispersion model input parameters. Therefore, submittal dates need to be revised so that facilities have the best data available. *(Borden)*	5.21-64. The District agrees that the compliance demonstration should not be required before the deadline for submittal of the enhanced emissions data required by Regulation 1.06 Section 4. The District will modify the due dates.
5.21 sec. 3.2 This section refers to §3.1, 3.4, and 3.5 of either Regulation 1.06 or Regulation 5.21. The wording should be changed to clarify the reference to the regulation in line 221. (*EPA*)	5.21-65. The reference to “this regulation” by custom is the regulation in which this reference is made. Thus, the reference in line 221 is to Regulation 5.21. The District will change this so that the meaning is clear.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 3.3 This section states that if the allowed emissions (or concentrations that result) exceed the goals, but the actual emissions do not, the facility may request that its permit be revised to reduce the allowable emissions. What benefit is there for the facility to request such a change? (*EPA*)	5.21-66. The benefit is that the company would then be in compliance with the EA goal or standard and would not be required to develop and implement a compliance plan.
5.21 sec. 3.8 This section says that the Board may require additional reductions from stationary sources (not necessarily permitted sources) if the ambient environmental acceptability standards are exceeded. The process by which the Board would decide which sources must reduce their emissions and by how much should be specified. (*EPA*)	5.21-67. Prior to developing an attainment strategy when the air quality does not comply with a NAAQS, the District does not predetermine, by regulation, which additional criteria pollutant emission reductions are required. Likewise, the District does not consider it appropriate to predetermine, by regulation, which additional TAC emission reductions should be required. Section 3.8 contained a requirement for public review and comment on any strategy to achieve compliance with the ambient goals of section 2.8. The District will modify section 3.8 to require the District to develop a proposed risk reduction plan that specifies the additional reductions that would, if approved by the Board, be required of each stationary source contributing to the exceedance of the ambient goal. The proposed plan would undergo an opportunity for public review and comment.
5.21 sec. 3.8 This section should require that, if an EA standard in sec. 2.8.1 or 2.8.2 is exceeded, stationary sources contributing to this exceedance must make additional reductions. *(ALA)*	5.21-68. As explained in the response to Comment No. 5.21-66, the District will revise section 3.8 to require the District to develop a proposed risk reduction plan that specifies the additional reductions that would, if approved by the Board, be required of each stationary source contributing to the exceedance of the ambient goal.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 3.9 This section references an alternative to some provisions. To what alternative does this refer? (*EPA*)	5.21-69. The first part of the sentence means "Instead of requiring the provisions of sections ... for these sources, the Board may adopt a regulation that addresses TAC for these sources."
5.21 sec. 3.10 This item gives the Board the authority to require additional emission reductions if synergistic or additive effects might be involved. Note that additive effects are already considered for carcinogens through the goals set in §2.8.2. Why is a target organ specific hazard index limit not considered for multiple noncarcinogens in §2.8 of Regulation 5.21? (*EPA*)	5.21-70. While, in theory, hazard quotients for TACs that affect the same target organ could be added, it is not certain that the health effects data would be available for all of the affected TACs, and, for the initial STAR Program, such an approach was considered to be too complex for effective implementation at this time.
5.21 sec. 3.10 What resources does the District have that will enable the staff to determine how a synergistic or additive toxicological effect may adversely affect human health, including all the RIA information? *(GLI, LGE)*	5.21-71. The Board may require additional reductions pursuant to section 3.10 only after there has been an opportunity for public review and comment. This would include the basis for the District's determination as well as the required reductions. The District plans to have resources adequate to make this determination.
5.21 secs. 3.11 and 3.13 The regulation needs to provide an alternate mechanism if a facility recently conducted an EA evaluation and installed controls. The regulated community needs to be given a time frame after it has conducted an EA evaluation before it has to conduct another one. A suggestion would be 7 years, 10 if the facility installed new controls in response to the EA evaluation. *(Borden)*	5.21-72. The District disagrees that a company should be given immunity for a specified period of time from conducting a revised EA evaluation when new information about the health effects of a TAC is available. The process drafted in section 3.11 provides up to three years to comply with any more stringent emission standards. Factors such as the cost of replacing a control device could be taken into consideration by the Board if the company were to request a variance from the time schedule imposed in section 3.11.

Section ... Comment ... From	Comment No. District Response
5.21 sec. 3.13 This item gives the District the authority to require emission reductions if the District determines that the ambient concentration resulting from a stationary source (not necessarily a permitted source) exceeds the environmental acceptability standards. How will the District determine this? What process will be used to determine which sources would be required to reduce emissions and by how much? (*EPA, GLI)*	5.21-73. The District would make this determination following the procedures in Regulation 5.21, which include determining the BAC pursuant to Regulation 5.20 and the maximum ambient concentration pursuant to Regulation 5.22. The District does not consider it appropriate to predetermine, by regulation, which additional TAC emission reductions should be required. The District notes, however, that section 3.13 applies to the situation where a single stationary source is responsible for emissions that may exceed an ambient goal. Section 3.8 applies to a situation where multiple stationary sources are involved and, unlike section 3.13, the process in section 3.8 involves the opportunity for public review and comment and then action by the Board.
5.21 sec. 3.13 This section, like section 2.8, needs to have a deadline for the District to take action. *(GLI)*	5.21-74. The intent of this section is to provide the District with the authority to require a stationary source to reduce emissions if the District makes a determination that emissions from the stationary source do not comply with the ambient standards in section 2.5 or goals in 2.8. The District cannot make this determination without adequate emissions data, such as those identified in Regulation 1.06 Section 4. However, not only does Regulation 1.06 Section 4 have various submittal dates, but Section 4 does not require all stationary sources to submit information nor does it require the submittal of information on all TACs. The District disagrees that a deadline is appropriate.

Section ... Comment ... From	Comment No. District Response
5.22 General Comment – Receptor Locations In the upcoming EPA residual risk program, EPA is using census track centroids to evaluate carcinogen risk as opposed to using the physical fenceline. Arkema recommends EPA's approach as one option to evaluate risks at locations where risks would actually occur. A second approach would be to require the facility to identify the nearest residential-use location and incorporate those locations into the receptor grid. *(Arkema)*	5.22-1. The District disagrees that either suggested approach is appropriate for the Louisville Metro program. The District's approach of using the point of maximum concentration in the ambient air is consistent with the EPA's longstanding policy of determining the maximum ambient concentration resulting from the emissions of a specific stationary source. Louisville Metro contains many densely populated, fully developed urban areas. Given the rapid development of the few remaining undeveloped areas in the Louisville Metro, the entire county may be considered a developed urban area. As such, the District disagrees that recognition of currently-undeveloped property in evaluating environmental acceptability is appropriate. However, the District will add a provision to Regulation 5.21 sections 2.3 and 2.6 that will allow it to consider land use and demographic factors in making a determination whether to approve a request for modification of an environmental acceptability goal.
5.22 General Comment – Receptor Locations The District should allow for industrial use corridors and transportation corridors. A facet of the Michigan program which was not incorporated into the STAR program was the authority to increase any risk-based limit by a factor of ten at any location that was not likely to become a long-term receptor. The commenter recommends that APCD adopt only this portion of the Michigan air toxics program. *(Arkema)*	5.22-2. The District does not agree that this relaxation in the Michigan program is appropriate for the Louisville Metro STAR Program. However, the District will add a provision to Regulation 5.21 sections 2.3 and 2.6 that will allow it to consider land use and demographic factors in making a determination whether to approve a request for a modification of an environmental acceptability goal.

Section ... Comment ... From	Comment No. District Response
5.22 General Comment – Receptor Locations The Texas air toxics program includes a provision that adjacent industrial sites that operate in tandem may petition the agency to designate the combined location as a single site for air toxics purposes. *(Arkema)*	5.22-3. The District intends to use the same criteria to establish the boundary of a stationary source for the purpose of determining environmental acceptability as are used for designating a stationary source. The key factor in this determination, as defined in Regulation 1.02 section 1.66, is whether two contiguous or adjacent properties are under the control of the same person or persons under common control.
5.22 General Comment The regulations do not address human exposure. The APCD will not be able to tell what the beneficial effects of the new regulations will be on public health in Jefferson County. *(GLI)*	5.22-4. Reductions in emissions of toxic air contaminants (TACs) will result in reductions in ambient concentrations of those TACs, thus reducing exposures to those TACs. Reduced exposures to TACs will result in improved health for the citizens of Louisville Metro.
5.22 General Comment A de minimis level should be established for modeling purposes. Those who emit very small, insignificant quantities should not be required to go through this labor intensive process. A de minimis level of 25 t.p.y. could serve as a reasonable cutoff. *(LGE)*	5.22-5. The District agrees that a de minimis level should be established, although the District disagrees with the suggested 25 tons-per-year level.
5.22 General Comment The methodology for determining risk levels is cumbersome. This is especially true for those facilities that are limited in staffing and resources. "Look up tables" should be readily available on the District's web site or more clearly referenced in the regulation. They should also be available during the public review process to allow facilities to assess their impact. *(LGE)*	5.22-6. The District has provided two "look up tables" in Regulation 5.22. The District posts all of its regulations on the District's web site and has posted the draft STAR Program regulations, so these draft look up tables are and will be available through the Internet.

Section ... Comment ... From	Comment No. District Response
5.22 General Comment Issues unaddressed by the STAR proposal include: • Use of volume sources to model leak detection and repair related emissions, • Designation of the discharge direction, • Designation of meteorological data used in modeling, • Use of local grids with UTM benchmark locations, and • Model version updates and replacements. The number of issues which must be considered and the rate of change of these parameters does not allow for timely and reasonable rule making. *(Arkema)*	5.22-7. Both the SCREEN models and the ISC3 model have an algorithm for treating an emission as a volume source. This would be an appropriate method for modeling leak emissions from a process. If the stack discharge is not unobstructed vertically upwards (the discharge is either horizontal or downwards), then an exit velocity of 0.001 meters per second would be used. If the discharge is horizontal, then the actual gas temperature would be used. If the discharge is downwards, then the ambient temperature should be used for the gas temperature. The District will develop and provide a standard set of meteorological data to be used in Tier 4 modeling. UTM coordinates are required to be submitted with the related stack and fugitive emission release parameters pursuant to Regulation 1.06 section 4.3.1. The reference in section 5.1 to the 40 CFR Part 51 Appendix W that identifies the EPA-approved models would be updated with the annual update of Regulation 1.15, thus allowing for the use of model version updates and replacements. The District will add a provision to Regulation 5.21 Section 3 that will allow a change to an established emission limit based upon a resubmitted demonstration of environmental acceptability using a model version update or replacement.

Section ... Comment ... From	Comment No. District Response
5.22 General Comment The procedures in this section appear to be applicable only to gases. These procedures should be expanded to address TACs that are emitted as particulate matter, including requiring particle size distribution data and other inputs required to model deposition. (*Sierra Club*)	5.22-8. The impacts of particulate emissions are assessed using the same dispersion models as would be used for gaseous emissions. Particle size data are not needed for determining environmental acceptability because the EPA-approved dispersion models that would be used do not take particle size into account.
5.22 General Comment The District should provide some guidance concerning the use of meteorological data for a modeling demonstration. It should post appropriate ISCST and/or AERMOD meteorological data on its website. *(Arkema)*	5.22-9. The District agrees and is developing a meteorological data set for use in the ISC3 model. While the AERMOD model has not yet been approved by the EPA, the District understands that this is likely to happen. The District will develop a meteorological data set and terrain data set for use with the AERMOD model when this model is approved by the EPA.
5.22 General Comment The factors and approaches to determine the maximum ambient concentration (Max_{Conc}) are very conservative and yield results well below expected actual ambient concentrations. *(Ford)*	5.22-10. The four approaches are all based on EPA-approved dispersion modeling.
5.22 General Comment Given the conservativeness built into the first 3 tiers, it would be expected that many facilities will have to undergo the thorough modeling of Tier 4 to better estimate potential Max_{Conc} levels. In addition, considering the conservativeness of the modeling, model validation may be needed to better correlate the real maximum emission concentrations to the computed theoretical Max_{Conc} levels. Additional adjustment should be provided where the modeling is shown to exaggerate the Max_{Conc}. *(Ford)*	5.22-11 Tier 4 is based on EPA-approved modeling.

Section ... Comment ... From	Comment No. District Response
5.22 sec. 1 The procedures for determining maximum ambient concentrations in sec. 1 should be expanded to clarify that: (1) this is the maximum concentration wherever the public has access, regardless of the existing land use; (2) that maximum permitted emissions should be used; and (3) that excess emissions, regardless of cause, must be considered. (*Sierra Club*)	5.22-12. (1) The procedure refers to the maximum concentration in the ambient air. Ambient air is defined in Regulation 1.02 section 1.6. When considering property not owned by the stationary source for which emissions are being evaluated, land use is not taken into account. The reference in the ambient air definition in Regulation 1.02 to access by the general public deals only with the property owned by the stationary source for which emissions are being evaluated. (2) The procedure refers to the allowed emissions, which is the same as the maximum permitted emissions. (3) Excess emissions are emissions that are greater than the allowed emissions, therefore an issue of compliance and enforcement. As used in the District's regulations, excess emissions are episodic, that is, they result from a startup, shutdown, or malfunction, and thus are not routine emissions. Modeling allowed emissions, or potential emissions if there is not an established emission standard, is appropriate for determining maximum ambient concentration.

Section ... Comment ... From	Comment No. District Response
5.22 sec. 1.2 This section states that the average emission rate may be used to determine the maximum ambient concentration for intermittent emissions if the average rate is not less than 10% of the maximum hourly rate. What is the basis for this 10% cut-off level? If the intermittent emissions are frequent (e.g., more than 50% of the averaging period), this 10% level may not be appropriate. (*EPA*) The proposed treatment of "intermittent emissions" is inappropriate as truly intermittent emissions could be below 10 percent of the maximum hourly rate. As the focus is on chronic effects which correlate better to annualized emissions, annualizing intermittent emissions should be used regardless of how much lower they may be to the single hour's maximum rate. *(Ford)*	5.22-13. The 10% cutoff is intended to provide a level of protection from acute effects. If, for example, the BAC averaging period for a TAC is annual, then the maximum hourly emission rate may be up to 10 times higher than the average emission rate. The meteorological conditions may result in up to a 50 times higher concentration over one hour than over one year. Therefore, the potentially higher 1-hour emission rate coupled with the meteorological conditions can result in an hourly ambient concentration up to 500 times higher than the annually-averaged impact. For many TACs, there is not sufficient data available to establish an acceptable acute exposure level. Thus, the 10% cutoff is used to provide a reasonable level of protection from the acute effects of a higher level of intermittent emissions.
5.22 sec. 1.3 There is no stipulation that the maximum ambient concentration must occur in Jefferson County. The possible effect is that point sources along the county line may face reduced allowable emissions based on impacts outside Jefferson County. *(GLI)*	5.22-14. The District has authority to regulate the air contaminant emissions that are released in Jefferson County.
5.22 sec. 1.3 The last sentence states: “The following is a brief description of the four procedures.” Are there other, more detailed procedures to be used? If so, please provide them. *(GLI)*	5.22-15. The four procedures are specified in Sections 2, 3, 4, and 5. Section 1.3 was intended to be informational, giving a simple description of the four procedures and their progression in complexity and conservatism. Instructions on the use of the models is available from the EPA web site from which the models may be downloaded.

Section ... Comment ... From	Comment No. District Response
5.22 sec. 1.3 The procedures for Tiers 1 and 2 are not clearly presented. If they can't be made more clear, a possible alternative is to remove Tiers 1 and 2 and be left with two options - Tiers 3 and 4. Tier 3, which consists of running either SCREEN3 or TSCREEN, should not take an overly burdensome amount of effort for permit applicants. These models are simple to use and were designed to be used by people without the need for any formal air modeling training. While more source specific information is required for the Tier 3 option, it is not much more than is required for Tier 2. Also, Tier 1 appears to be very conservative and may not be useful in many situations. (*EPA*)	5.22-16. The District will provide assistance in understanding how to use Tier 1 and Tier 2. Tier 1 is intended to be conservative, because important factors in determining dispersion, such as stack height, building height, and distance to the property line, are not used. The Tier 1 procedure is useful when there is a small emission of a TAC with relatively low toxicity.
5.22 secs. 1.3.1 - 1.3.4 In conjunction with the new definition of ambient air, which includes land to which the public does not have access, maximum receptor concentrations located inside industrial facilities will be used to calculate allowable emissions even though this air is regulated by OSHA and is not accessible to the public. (Examples) The new regulations may be thousands of times more stringent if applied at a receptor just beyond the fence line in another industrial facility's secured area. *(GLI)*	5.22-17. The response to Comment No. 1.02-5 discusses the EPA's long-standing policy regarding what is considered "ambient air" when evaluating the emissions from a specific stationary source and provides references to the pertinent EPA policy memos. From a practical standpoint, much property in Louisville Metro is private property and the owner has the right to restrict access by the general public. The allowed emissions from a process or process equipment should not be dependent upon a decision of the owner of the neighboring property to restrict or allow access by the general public.

Section ... Comment ... From	Comment No. District Response
5.22 sec. 1.3.2 This section states that the allowed hourly emission rate is divided by the appropriate annual factor from Table 2 to give the maximum ambient concentration. Will every TAC have an "allowed hourly emission rate?" It appears that the allowed emission rate is based on 401 KAR 63:022, which indicates that the averaging period for the allowable emission rate is variable and based on the Threshold Ambient Limit (TAL) provided in Appendix B of 401 KAR 63:022 (e.g., 1-hour or 8-hour). It is suggested that the word "hourly" be removed from this section. (*EPA*)	5.22-18. Air pollution control programs have traditionally used pound-per-hour limits as well as limits for appropriate other time frames, such as pounds per day for ozone State Implementation Plans and pounds (or tons) per year for new source review applicability. Additionally, 40 CFR §60.14(b), relating to modifications, states in part: "Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable. ...." Pound-per-hour limits are appropriate. Allowed emission rates for TACs will not be based on 401 KAR 63:022, but on compliance with the provisions of the STAR Program regulations. If allowed emission rates are not established, or not established for an appropriate timeframe for a TAC that is emitted from a process or process equipment subject to the requirement of demonstrating environmental acceptability, then the potential emissions of that TAC would be used.
5.22 sec. 2 What is the origin of Table 1 values and methodology? *(GLI, LGE)*	5.22-19. The values in Table 1 were derived with the EPA SCREEN3 model, using a building height of 25 feet, a stack-to-building-height ratio of 1.25 (a stack height of 31.25 feet) and a distance of 100 feet. An explanation of the models and parameters used, including averaging time conversion factors, is included in Attachment #1 of the Preliminary Regulatory Impact Assessment.

Section ... Comment ... From	Comment No. District Response
5.22 sec. 2 Conversion factors in Table 1 that go from one ambient concentration averaging time to another do not match EPA's conversion factors. Please explain how these were developed and the reasoning behind it. *(GLI)*	5.22-20. An explanation of the models and parameters used, including averaging time conversion factors, is included in Attachment #1 of the Preliminary Regulatory Impact Assessment. The specified conversion factors were demonstrated to determine concentrations that were closer in value to the results obtained by using the ISC3 model. The District would review a submitted demonstration documenting that a different set of conversion factors would provide concentrations closer in value to the results obtained by using the ISC3 model.

Section ... Comment ... From	Comment No. District Response
5.22 sec. 2.1 In what situations would these additional 1-hour factors (those that correspond to the annual, 24-hour, and 8-hour BAC averaging times) be applicable? Do these additional 1-hour entries apply if a contaminant is a carcinogen (annual average BAC) and a non-carcinogen (1-hour, 8-hour, or 24-hour average BAC)? If this is the intent, shouldn't there be additional entries in the 24-hour and 8-hour columns for the annual average BAC row, since a contaminant could have a 24-hour or 8-hour average BAC instead of a 1-hour average BAC? The procedures for implementing the factors in this table need to be clarified. (*EPA*)	5.22-21. The last sentence in section 2.1 states: "If Table 1 contains two factors for a benchmark ambient concentration averaging time, then the factor that results in the greater maximum concentration shall be used." For a TAC with an annual averaging time, the allowed annual emission (in pounds per year) would be divided by 480 to derive the maximum concentration from Equation 1 and the allowed hourly emission (in pounds per hour) would be divided by 0.54 to derive the maximum concentration from Equation 2. The greater maximum concentration derived from Equation 1 or Equation 2 would be used in determining compliance with the Environmental Acceptability levels in Regulation 5.21. A TAC that is determined to be a carcinogen would need to be evaluated for environmental acceptability pursuant to the procedure in Regulation 5.21 by comparing the maximum concentration to the benchmark ambient concentration for a carcinogen (BAC_C) as well as to the benchmark ambient concentration for noncarcinogenic effects (BAC_{NC}). From a practical standpoint, the BAC_C will generally result in a more stringent emission standard than the BAC_{NC}, but there may be cases for which this is not true.
5.22 sec. 2.2 A detailed description of the methodology that was used to develop the factors in Table 1 is needed to be able to adequately review the appropriateness of this "simple factor" procedure. Were these factors developed by running SCREEN3 in a conservative mode? The methodology does not need to be provided in the regulation, but it should be provided in supporting documentation. (*EPA*)	5.22-22. An explanation of the models and parameters used, including averaging time conversion factors, is included in Attachment #1 of the Preliminary Regulatory Impact Assessment.

Section ... Comment ... From	Comment No. District Response
5.22 secs. 2.2 and 3.5 The factors contained in Tables 1 and 2 cannot be evaluated without supporting calculations. We suggest that a staff report be provided when the draft rule is released that supports the calculations and assumptions in Regs. 5.20, 5.21, and 5.23. (*Sierra Club*)	5.22-23 An explanation of the models and parameters used, including averaging time conversion factors, is included in Attachment #1 of the Preliminary Regulatory Impact Assessment.
5.22 sec. 2.2 How are the "allowed emission" rates determined? If these "allowed emissions" are calculated from 401 KAR 63:022, it does not appear that there are any annual or 24-hour averaging times (only 8-hour and 1-hour averages are provided in 401 KAR 63:022). The basis for the "allowed emission" entries should be clarified. (*EPA*)	5.22-24. If allowed emission rates are not established, or not established for an appropriate timeframe for a TAC that is emitted from a process or process equipment subject to the requirement of demonstrating environmental acceptability, then the potential emissions of that TAC would be used. This is likely to be the case for many of the TAC emissions from existing processes and process equipment. However, in recognition that using the potential emissions could result in concentrations greater than the goals and standards in Regulation 5.21, section 3.3 of Regulation 5.21 allows the owner or operator to request a revised (or new) permit condition to reduce the allowable emissions for that TAC, which would then become an enforceable part of the applicable permit upon receipt by the District.
5.22 sec. 3 What is the origin of Table 2 values and methodology? *(GLI, LGE)*	5.22-25. The Table 2 values were derived using the EPA SCREEN3 model. An explanation of the models and parameters used, including averaging time conversion factors, is included in Attachment #1 of the Preliminary Regulatory Impact Assessment.

Section ... Comment ... From	Comment No. District Response
5.22 sec. 3 Please explain why the tables for building and stack height factors based on the use of SCREEN3 are reasonable. An explanation and description of the method validity should be included. *(GLI)*	5.22-26. An explanation of the models and parameters used, including averaging time conversion factors, is included in Attachment #1 of the Preliminary Regulatory Impact Assessment. The purpose of including a "look up table" in Regulation 5.22 is to provide a simple method for determining environmental acceptability. Section 5 allows for the use of other EPA-approved models.
5.22 sec. 3.2 The following should be added to the end of the last sentence: "... the height of the influential building, <u>as determined in Section 3.7.2.</u>" (*EPA*)	5.22-27. The District disagrees that it is necessary to refer to section 3.7.2 twice in this sentence.
5.22 sec. 3.3.2 Please define influential building height. Why can't this method be used if the influential building height is >100 feet? *(GLI, LGE)*	5.22-28. The procedure for determining the influential building height, and thus the definition, is contained in section 3.7.2. The table was designed as a simple tool for smaller sources (with generally a lower level of emissions) to demonstrate environmental acceptability. It is not as likely that these smaller sources would have buildings that exceed 100 feet in height. Therefore, additional modeling for building heights greater than 100 feet was not performed. If the influential building is greater than 100 feet, then the Tier 3 or 4 modeling would be necessary (unless environmental acceptability was demonstrated using the Tier 1 look-up table.

Section ... Comment ... From	Comment No. District Response
5.22 sec. 3.3.7 This section states that, if the stack is not attached to a building, then a building height of 40% of the stack height shall be assumed. If this value is less than 100 feet, can Table 2 be used? Can a source assume a lower (worse case) stack height and a 100 foot building if the actual building height is 40% of the actual stack height? *(GLI, LGE)*	5.22-29. Yes, if 40% of the stack height (for a stack that is not attached to a building) is less than 100 feet, then Table 2 may be used. In response to the hypothetical case described in this comment, a company could assume a lower stack height and use the Tier 2 table. In doing so, the result will be a higher calculated maximum concentration, making it more difficult to demonstrate environmental acceptability. However, if environmental acceptability is demonstrated, then this conservative approach would be acceptable, recognizing that any resulting emission standard would be more stringent than if a Tier 3 screening model had been used.
5.22 secs. 3.5.1 - 3.5.3 How were these adjustment factors developed? The methodology used to develop these factors should be provided in supporting documentation so it can be reviewed. (*EPA*)	5.22-30. An explanation of the models and parameters used, including averaging time conversion factors, is included in Attachment #1 of the Preliminary Regulatory Impact Assessment.
5.22 sec. 3.6 It appears a typo was made in the second sentence which refers to the intermittent emission provision in "section 1.3." The correct section reference is "section 1.2." (*EPA*)	5.22-31. The District agrees and will make this correction.
5.22 sec. 3.6 It is suggested that "Allowed 1-hour emission" in Equation 5 be replaced with "Allowed emission." (*EPA*)	5.22-32. This equation is intended to use the allowed 1-hour emission rate (in pounds per hour), noting, however, that for use in Equation 5 this rate may be adjusted pursuant to the intermittent emission provision of section 1.2.

Section ... Comment ... From	Comment No. District Response
5.22 sec. 3.7.2 The procedure for determining the height of the influential building appears to be a simplified version of EPA's Good Engineering Practice (GEP) stack height procedure contained in EPA's "Guideline for Determination of Good Engineering Practice Stack Height (Technical Support Document for the Stack Height Regulations), EPA-45-/4-80-023R." The simplified procedure presented in this section does not account for the fact that a short, wide building may have a greater impact on dispersion than a tall, narrow building. Information should be provided which supports that this simplified procedure provides a conservative estimate of maximum ambient concentration when used in the Tier 2 analysis contained in Section 3 of the draft regulations. (*EPA*)	5.22-33. The District recognizes that the EPA's Good Engineering Practice (GEP) formula is more complicated. However, this simplified version is used in conjunction with the Tier 2 table (which is based on SCREEN3 modeling), and the District considers that the conservative nature of the SCREEN3 model adequately compensates for any more complex determination of the influential building. This issue would be dealt with more precisely if a Tier 4 model were used, in which case the EPA guidance for the Tier 4 model would apply.
5.22 sec. 3.7.2 The last sentence states: "If the stack is not attached to a building, then a building height of 40% of the stack height shall be assumed." The use of the terms "not attached to a building" are not clear. It appears that this sentence is referring to the case when there are no influential buildings near the stack (none within 5 times height). This should be clarified. (*EPA*)	5.22-34. The instruction to use a building height of 40% of the stack height if the stack is not attached to a building explains what building height would be assumed in this case. However, this assumed building height does not negate the rest of the instruction to determine the height of the influential building. If there were a taller building within the specified distance from the stack, then that taller building would be the influential building. If there were no taller building within the specified distance from the stack, then a building height of 40% of the stack height would be assumed, even though there is no actual building.
5.22 sec. 3.7.2 The basis for the 40% of stack height value should be provided in supporting documentation for the regulation. (*EPA*)	5.22-35. A stack height that is 2.5 times the building height is not considered to be influenced by downwash.

Section ... Comment ... From	Comment No. District Response
5.22 Sec. 3.8 (mislabeled as Section 3.5 on Page 5.22-5) Table 2 provides the Annual Factors to be used with Equation 5. A detailed description of the methodology that was used to develop the factors in Table 2 is needed to be able to adequately review the appropriateness of these "Annual Factors." Were these factors developed by running SCREEN3 in a conservative mode? The methodology does not need to be provided in the regulation, but it should be provided in supporting documentation so that complete review may be conducted. (*EPA*)	5.22-36. An explanation of the models and parameters used, including averaging time conversion factors, is included in Attachment #1 of the Preliminary Regulatory Impact Assessment. The factors in Table 2 were developed by running SCREEN3 in the regulatory default mode. The regulatory default mode is discussed in Section 1.9 of the SCREEN3 manual that may be downloaded from the same EPA web site as the SCREEN3 model.
5.22 secs. 4 and 5 Why were the Tier 3 and Tier 4 models selected? What other models were reviewed when making this determination? *(GLI, LGE)*	5.22-37. The SCREEN3 and TSCREEN models were chosen for Tier 3 because these screening models are approved by the EPA and in common use by other state and local air pollution control agencies. The ISC3 model was identified in Tier 4 because it is the EPA-approved model that is typically used by the EPA and state and local agencies when full dispersion modeling is required. The District included in Tier 4 "... or other appropriate model included in Appendix A *Summaries of Preferred Air Quality Models* to 40 CFR Part 51 Appendix W *Guideline on Air Quality Models*" to allow the use of any appropriate EPA-approved model. The District recognizes that the EPA is likely to approve AERMOD, in which case AERMOD would then be included in Appendix A.

Section ... Comment ... From	Comment No. District Response
5.22 sec. 4.1 SCREEN3 and TSCREEN are appropriate screening models to use for determining the maximum ambient concentration, but it is important to provide some guidance about the model options and inputs that are used to run the models. It is suggested that a condition be added to Section 4.1 stating that if SCREEN3 is used, it is run in the "regulatory default mode" which is described in Section 1.9 of the SCREEN3 User's Guide (EPA-454/B-95-004) available on EPA's SCRAM website (www.epa.gov/scram001). TSCREEN does not have a "regulatory default mode," so it is suggested that if an applicant wishes to use TSCREEN, the model inputs and options be submitted to the District for approval prior to running the model. Pre-approval of model inputs and options would also be a good idea for running SCREEN3, but not as critical. (*EPA*)	5.22-38. The District agrees that section 4.1 should include a requirement that the SCREEN3 model be run in the regulatory default mode. The output of the SCREEN3 model would identify any parameters that were changed from the regulatory default mode. Therefore the District does not consider that it is necessary for pre-approval of the model inputs and options when SCREEN3 is used. With respect to TSCREEN, the District will add a provision to section 4.1 that will require the model inputs and options used to be submitted with the results of TSCREEN modeling.
5.22 sec. 4.1 It is important to clarify whether the maximum ambient concentration predicted by SCREEN3 or TSCREEN must occur outside the facility fence-line or is it the absolute maximum value predicted by the model, regardless of whether it is inside or outside the fence-line. (*EPA*)	5.22-39. The first sentence in section 4.1 specifies that it applies to the maximum concentration in the ambient air. The definition of ambient air does not include the area within the stationary source's fenceline.

Section ... Comment ... From	Comment No. District Response
5.22 sec. 4.2 This section states that the resulting maximum concentration from SCREEN3 or TSCREEN is in units of $\mu g/m^3$ for a 1-hour averaging time. This is true for SCREEN3, but is not always true for TSCREEN. The default output from TSCREEN is a 1-hour average, but it has options for longer term average outputs (3-hour, 8-hour, 24-hour, annual). This section should clarify whether these longer averaging time outputs from TSCREEN are acceptable for use. (*EPA*)	5.22-40. The averaging time conversion factors proposed were demonstrated to result in concentrations closer to the values determined using the ISC3 model (See Attachment #1 of the Preliminary Regulatory Impact Assessment). It is the District's understanding that the EPA's averaging time conversion factors associated with the SCREEN3 model are the same conversion factors built into TSCREEN. Therefore, the built-in averaging time conversion factors should not be used and the 1-hour average default output of the TSCREEN model should be used along with the averaging time conversion factors specified in section 4.2.
5.22 sec. 4.2 How were the adjustment factors in this section derived? They are different than the adjustment factors provided in Section 4.2 of EPA's guidance document titled: "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised, EPA-454/R-92-019," which have been historically used by EPA when adjusting SCREEN3 output to longer-term averaging periods. The different adjustment factors may be appropriate, but their technical basis should be provided in supporting documentation so their appropriateness can be determined. (*EPA*)	5.22-41. An explanation of the models and parameters used, including averaging time conversion factors, is included in Attachment #1 of the Preliminary Regulatory Impact Assessment.
5.22 sec. 5 It is recommended that the District adopt by reference the existing EPA "Guidelines for Air Dispersion Models" in 40 CFR 51 Appendix W (instead of codifying portions of this document in the STAR proposal) in lieu of detailed descriptions of the modeling system in the proposal. *(Arkema)*	5.22-42. The District considers the reference to Appendix W adequate. It is not necessary to formally adopt by reference 40 CFR 51 Appendix W so that it becomes a part of the District's regulation.

Section ... Comment ... From	Comment No. District Response
5.22 sec. 5 This overlooks many EPA models approved for use such as *Air Toxics Risk Assessment Reference Library Volume 2 – Facility-Specific Risk Assessment*, EPA publication EPA-453-K-04-001B. Since there [are] only two point source models listed in Appendix W as opposed to approximately 10 other models from EPA for point sources, there is no approved option for assessing actual human risk in Jefferson County. *(GLI)*	5.22-43. The basis of a demonstration of environmental acceptability in the Part 5 regulations is to determine, through dispersion modeling, the maximum ambient air concentration of a TAC for the appropriate averaging time period and then compare that concentration to the benchmark ambient concentration for that TAC to determine the risk, which is then compared to the applicable goals and standards. The dispersion models identified in the *Air Toxics Risk Assessment Reference Library Volume 2 – Facility-Specific Risk Assessment* are included in the dispersion models authorized for use in Regulation 5.22. However, the District will add a provision to Regulation 5.21 sections 2.3 and 2.6 that will allow the District to consider land use and demographic factors in making a determination whether to approve a request for modification of an environmental acceptability goal.
5.22 sec. 5.1 This section provides the option of using EPA's Industrial Source Complex (ISC3) model or other appropriate Appendix A model. These are appropriate models. However, there may be situations in which other Non-Appendix A (Appendix B or other) models may be appropriate. It is suggested that these other appropriate model options not be excluded from use. However if a Non-Appendix A model is used, the applicant should receive prior approval from the District for its use. (*EPA*)	5.22-44. The District will add the Appendix B models listed in 40 CFR Part 51 Appendix W to the models authorized for use in Section 5, with the restriction that the use of an Appendix B model must be approved by the District, which would require a demonstration that one of the three conditions listed in section B.0 *Introduction and Availability* is met.

Section ... Comment ... From	Comment No. District Response
5.22 sec. 5.1 A company should provide a "modeling protocol" or some type of documentation containing model options and inputs to the District prior to conducting any modeling under this Tier 4 option. These more complex models have many options that should be discussed prior to running the models. (*EPA*)	5.22-45. The District agrees that it is appropriate to require the submittal of documentation containing the model options and inputs to the District. While the District will encourage companies to submit a modeling protocol that identifies the model options and inputs prior to performing the actual modeling, the District does not consider, for the purpose of the STAR Program, that this should be required. However, the District will add a provision giving it the authority to disapprove the results of a modeling demonstration if the District determines that the model chosen, model options, or model inputs are not appropriate to model the emissions from a process or process equipment.
5.22 sec. 5.1 As previously noted, we suggest that if the ISCST3 model is chosen, that it be run with the "regulatory default options," which are described in Section 1.2.4.1 of the "User's Guide for the Industrial Source Complex (ISC3) Dispersion Models, Volume 1, EPA-454/B-95-003a." (*EPA*)	5.22-46. The District agrees that section 5.1 should include a requirement that the ISC3 model be run using the regulatory default options.
5.22 secs. 4 and 5 The District should adopt the 0.6 adjustment factor for fugitive emissions, developed by the Texas Natural Resources Conservation Commission and discussed in the March 6, 2002 Guidance: *Modeling Adjustment Factor for Fugitive Emissions,* for use with Tier 3 and Tier 4 models. As indicated in this document, the TNRCC considers that the EPA's SCREEN and ISC models significantly overestimate the concentration predictions from fugitive emissions. *(ASRC)*	5.22-47 The District disagrees that the Texas 0.6 adjustment factor for fugitive emissions that Texas applies to the results of the EPA's SCREEN and ISC models should be adopted for use in the STAR Program. The EPA disagrees with the use of this adjustment factor. EPA Region 6 has provided formal written comments, with respect to several proposed permit approvals, that the EPA does not approve of the use of this adjustment factor for fugitive emissions. The District is not aware of any other state or local program that has adopted the Texas fugitive emission adjustment factor.

Section ... Comment ... From	Comment No. District Response
5.23 General Comment Please consider renumbering the TAC categories as 1 through 4, instead of 1, 1A, 2 and 3. Otherwise they will probably be mistakenly, but commonly, identified as 1 through 4. *(Noveon)*	5.23-1. The District will renumber the TAC categories as 1 through 4. However, to avoid confusion with the categories as identified in the September 16, 2004, draft regulations, the District will use the Category 1, 1A, 2, and 3 numbers in this comment/response document.
5.23 General Comment The TRI cutoff should be noted. It is confusing to have different reporting limits. *(LGE)*	5.23-2. The purpose of Regulation 5.23 is to identify the chemicals that will be addressed in the STAR Program. Reporting cutoffs and other de minimis issues will be addressed in Regulations 1.06 and 5.01.
5.23 General Question Why is the District requiring facilities to consider all use of listed chemicals or chemical categories without applying thresholds similar to the TRI (examples)? *(GLI)*	5.23-3. The purpose of Regulation 5.23 is to identify the chemicals that will be addressed in the STAR Program. Reporting cutoffs and other de minimis issues will be addressed in Regulations 1.06 and 5.01.
5.23 General Question Facilities only know the presence of TACs if they are listed on the MSDS for the chemical substances they use. MSDSs provide information on constituent levels in mixtures, but only at concentrations above 1% for noncarcinogens and .1% for carcinogens. The TRI program does not require facilities to analyze further. MSDS information should be identified as an acceptable source for information about constituent levels in a mixture. *(GLI, PPG)*	5.23-4. The purpose of Regulation 5.23 is to identify the chemicals that will be addressed in the STAR Program. Reporting cutoffs and other de minimis issues will be addressed in Regulations 1.06 and 5.01. The Material Safety Data Sheet (MSDS) threshold issue will be addressed in Regulation 5.01 section 1.6.1.

Section ... Comment ... From	Comment No. District Response
5.23 General Comments The categories from 1A down appear to be based on insufficient data to warrant addressing in such a rigorous fashion. *(EcoSolve)*	5.23-5. There is a sufficient basis for addressing the Category 1A, 2, and 3 TACs. The Category 1A TACs were chosen because of their role in the high level of risk determined for Jefferson County by EPA Region 4. The risk derived from the Risk-Screening Environmental Indicators (RSEI) model was based on reported actual emissions of those TACs. The Category 2 TACs are listed by the EPA because these hazardous air pollutants "... present the greatest threat to public health in the largest number of urban areas ..." [Clean Air Act Section 112(k)(3)(B)(i)]. The Category 3 TACs are listed pursuant to Section 112(b) of the Clean Air Act because these chemicals "present, or may present, through inhalation or other routes of exposure, a threat of adverse human health effects (including, but not limited to, substances which are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction, or which are acutely or chronically toxic) or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition, or otherwise ..." [Clean Air Act Section 112(b)(2)].
5.23 General Comment This regulation establishes four categories of TACs. It appears that the goals, standards, and reporting requirements in Regs. 5.01 and 5.21 only apply to Categories 1 and 1A. The chemicals in these categories are those that have been detected at levels of concern in Louisville air, or reported at high levels in the EPA's TRI. This is problematic because many highly toxic compounds have either not been measured in Louisville air, or are not accurately reported, or are not reported at all in the TRI. (Explanation) (*Sierra Club*)	5.23-6. The purpose of Regulation 5.23 is to identify the chemicals that will be addressed in the STAR Program. Although not an issue regarding Regulation 5.23, the District notes that Category 2 and 3 TACs are addressed in Regulation 5.01. TACs for which there is an identified concern in Louisville Metro could be added to Regulation 5.23 through future rulemaking.

Section ... Comment ... From	Comment No. District Response
5.23 General Comment If an industry is regulated or anticipates that it will be regulated for a particular chemical (e.g. mercury), then that federal regulation will preempt Regulation 5.23. *(LGE)*	5.23-7. The District disagrees that promulgated or anticipated federal regulations would preempt the District from adopting a regulation addressing the same subject matter. Unless expressly restricted in a different section of the Clean Air Act, Section 116 specifically grants authority to state and local air pollution control programs to establish requirements that are more stringent than the federal requirements. The Clean Air Act does not contain a restriction to this general Section 116 authority with respect to the MACT standards.
5.23 General Comment Please provide a de minimis exemption. *(Arkema, DDE, GLI, EcoSolve, Engelhard, PPG)*	5.23-8. The purpose of Regulation 5.23 is to identify the chemicals that will be addressed in the STAR Program. Reporting cutoffs and other de minimis issues will be addressed in Regulations 1.06 and 5.01.

Section ... Comment ... From	Comment No. District Response
5.23 General Comment The number of chemicals affected by this regulation has been inaccurately characterized. There are 18 entries in the Category 1 list. Only 14 of those are individual chemicals. A source reports that there are at least 3724 chemicals that contain arsenic. Other examples are given. *(GLI, Solae)*	5.23-9. The hazardous air pollutants (HAPs) listed pursuant to Section 112 of the Clean Air Act have been identified for fourteen years as a list of 189 (now 187 after the de-listing of caprolactam and ethylene glycol monobutyl ether). The federal HAP lists contains many groups of compounds, including arsenic, cadmium, chromium, and nickel, the four compound groups that are included on the Category 1 TAC list. The HAPs, including chemicals that are included in a chemical group category, are subject to reporting and control requirements. The glycol ethers group that is included on the Category 1A TAC list is also one of the "188" HAPs. The groups included on the Category 1A list are all listed as groups for the TRI reporting requirements. The precision of listing unique chemicals that are included in a chemical group is no different for the STAR Program than it is for the federal HAP program or the TRI reporting program.
5.23 General Comment The proposed regulation exempts from the definition of TAC emissions of natural gas, LPG and propane. This is reasonable but this exemption should be extended to emissions from the combustion of these clean gaseous fuels. Otherwise, the lack of a de minimis emissions rate exemption, or exemption specific to clean gas combustion, will require a large effort to calculate emissions and perform modeling for operations that are not real concerns. *(GLI)*	5.23-10. The purpose of Regulation 5.23 is to identify the chemicals that will be addressed in the STAR Program. Reporting cutoffs and other de minimis issues will be addressed in Regulations 1.06 and 5.01. The District notes that natural gas is not listed as an exempt substance in Section 5.

Section ... Comment ... From	Comment No. District Response
5.23 General Comment We support the concept that constituents not identified as a risk contributor in Jefferson County or on the HAP list should not presumptively be placed on any of the STAR TAC lists. *(Arkema, EcoSolve)*	5.23-11. The District notes that diesel particulate matter, one of the EPA's 33 urban air toxics identified pursuant to Section 112(k) of the Clean Air Act, is listed in Section 3 as a Category 2 TAC. Specific TACs are listed in Regulation 5.23 only through a formal rulemaking process; there is no automatic placement of a TAC on a TAC category list.
5.23 General Comment The 1A category should be eliminated and categories 1A, 2 and 3 should be reviewed for reductions in size of the lists or eliminated altogether. *(EcoSolve)*	5.23-12. There is a sufficient basis for addressing the Category 1A, 2, and 3 TACs. The Category 1A TACs were chosen because of their role in the high level of risk determined for Jefferson County by EPA Region 4. The risk derived from the Risk-Screening Environmental Indicators (RSEI) model was based on reported actual emissions of those TACs. The Category 2 TACs are listed by the EPA because these hazardous air pollutants "... present the greatest threat to public health in the largest number of urban areas ..." [Clean Air Act Section 112(k)(3)(B)(i)]. The Category 3 TACs are listed pursuant to Section 112(b) of the Clean Air Act because these chemicals "present, or may present, through inhalation or other routes of exposure, a threat of adverse human health effects (including, but not limited to, substances which are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction, or which are acutely or chronically toxic) or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition, or otherwise ..." [Clean Air Act Section 112(b)(2)].

Section ... Comment ... From	Comment No. District Response
5.23 General Comment This regulation should include a procedure to add TACs to those currently listed. (*Sierra Club*)	5.23-13. TACs for which there is an identified concern in Louisville Metro could be added to Regulation 5.23 through future rulemaking. A more specific procedure is not needed.
5.23 General Question Please provide RIA information on the impact on the regulated community and the public of each chemical listed for Category 1, Category 1A, Category 2 and Category 3 TACs. *(LGE)*	5.23-14. The RIA will be developed and made available as required by Regulation 1.08.
5.23 General Comment How is one to handle multi-category compounds? (Examples given.) *(DDE)*	5.23-15. A compound that would be included in two categories, such as the example given in this comment of a cyanate of a metal, would be subject to the more stringent emission standard necessary for demonstrating environmental acceptability. However, in this case, or for any case in which a specific chemical is included in a group of compounds, such as an arsenic compound, a benchmark ambient concentration for that specific chemical, derived using the methodology in Regulation 5.20, could be used instead.
5.23 General Comment A number of the industrial facilities in Jefferson County, particularly in the Rubbertown area, have the potential to emit dioxin and dioxin-like compounds. Thus, dioxin and dioxin-like compounds should be added to the list of toxic air contaminants, preferably to Category 1 or 1A. *(REACT)*	5.23-16. Category 3 TACs, derived from the Clean Air Act HAP list, include 2,3,7,8-tetrachloro-dibenzo-p-dioxin. Other dioxin-like compounds for which there is an identified concern in Louisville Metro could be added to Regulation 5.23 through future rulemaking.

Section ... Comment ... From	Comment No. District Response
5.23 sec. 1 – Category 1 TACs The authors of the West Jefferson County Risk Assessment acknowledged that the risk associated with chromium is based on the assumption that it was in the form of hexavalent chromium. Atomic absorption cannot distinguish between hexavalent chromium and the much less toxic trivalent chromium. Please explain the reasoning of including chromium and all of its compounds in Category 1 without more investigation into the sources of chromium emissions and the type of chromium emitted. *(ASRC, GLI)*	5.23-17. While it is unlikely that all of the monitored chromium was in the hexavalent state, it is just as unlikely that all of the monitored chromium was in the trivalent state. In demonstrating environmental acceptability of chromium compounds, a company could document how much of the chromium emission was hexavalent and how much was trivalent and use different benchmark ambient concentrations based upon this difference.
5.23 secs. 2 and 3 – Categories 1 and 1A TACs Please explain the inclusion of categorical entries such as arsenic and arsenic compounds in Categories 1 and 1A. The normal analytical method for metal compounds is atomic absorption, which can't identify the compounds that contain the metal as part of their structure. Please explain why this regulation treats all compounds that contain a metal as part of its structure as having the same degree of risk as the parent metal. *(DDE, GLI)*	5.23-18. The federal HAP list contains many groups of compounds, including arsenic, cadmium, chromium, and nickel, the four compound groups that are included on the Category 1 TAC list. As a result, the federal reporting and control requirements of the HAP program apply to the chemicals that are included in a chemical group category. However, in demonstrating environmental acceptability, a benchmark ambient concentration (BAC) for that specific chemical, derived using the methodology in Regulation 5.20, could be used instead of the BAC for the metal.
5.23 sec. 4 – Category 3 TACs The District should rely on EPA's HAP list at sec. 112(b) of the CAA, so that the District will not have to change the regulation when EPA changes the HAP list. *(Arkema)*	5.23-19. The District already has a HAP list in Regulation 5.14. In the first fourteen years since the signing of the Clean Air Act, only one HAP was delisted and no HAP added to the EPA's list (ethylene glycol monobutyl ether was delisted 11-29-04). The District does not consider keeping current with the EPA's HAP list to be a burden.

Section ... Comment ... From	Comment No. District Response
5.23 sec. 4 Methyl acrylate is released into the air by Noveon and R&H and should be added to Category 3 [the HAP list]. *(REACT)*	5.23-20. Methyl acrylate is not a listed hazardous air pollutant, therefore it would be inappropriate to include this chemical on the Category 3 list. TACs for which there is an identified concern in Louisville Metro could be added to Regulation 5.23 through future rulemaking.
5.23 sec. 5 This section exempts any substance that currently has an ambient air quality standard. Substances with an ambient air quality standard contribute to the overall public health risk of exposed communities. These substances should be included in calculating the cancer risk (lead) and noncancer hazard quotient (NO_X, SO_2, CO, PM_{10}). (*Sierra Club*)	5.23-21 The District considers specific chemicals with national ambient air quality standards established by the EPA to be adequately regulated.
5.23 sec. 5.2 Carbon dioxide is exempted from being considered a toxic air contaminant. Carbon dioxide is an asphyxiant that displaces oxygen from the breathing atmosphere, thus it should be removed from the list of exempted substance and added to Category 1A. (Explanation) (*Sierra Club*)	5.23-22. The District considers a compound that acts as a simple asphyxiant (that is, the compound displaces oxygen), but is not relatively toxic itself, appropriately exempted from the definition of toxic air contaminant.

COMMENTERS

American Chemistry Council	ACC
American Lung Association of Kentucky	ALA
American Synthetic Rubber Company	ASRC
Arkema, Inc.	Arkema
Associated Industries of Kentucky	AIK
Borden Chemical, Inc.	Borden
DuPont Dow Elastomers	DDE
EI duPont de Nemours & Co.	EID
EcoSolve, Inc.	EcoSolve
Environmental Integrity Project	EIP
Engelhard Corporation	Engelhard
Environmental Protection Agency Region 4	EPA
Environmental Quality Commission	EQC
Ford Motor Company	Ford
Frost Brown Todd	FBT
Greater Louisville Inc.	GLI
General Electric	GE
Global Community Monitor (Denny Larson)	GCM
Hepler, Winnie	WH
International Institute of Synthetic Rubber Producers	IISRP
Justice Resource Center	JRC
KY Resources Council	KRC
LDAR Workgroup	LDAR Workgroup
Lou. Gas & Electric	LGE
National Black Envi. Justice Network	NBEJN
Noveon, Inc.	Noveon
OxyVinyls Services, Inc.	OxyVinyls
KY Paint Council	KPC
Linebach Funkhouser, Inc.	LBI
National Paint & Coatings Association	NPCA
PPG Architectural Finishes	PPG
Pro-Tek Environmental	Pro-Tek
Rubbertown Emergency Action	REACT
Rohm & Haas	R&H
Greater Lou. Sierra Club	Sierra Club
Solae (DuPont Soy Polymers)	Solae
Sud-Chemie Inc.	Sud-Chemie
Texas Gas Transmission	Texas Gas
University of Louisville	UofL
West. Jeff Co. Comm'ty Task Force	WJCCTF
Zeon Chemicals L.P.	Zeon

ACRONYMS AND ABBREVIATIONS

ACGIH	American Conference of Governmental Industrial Hygienists
BACc	Benchmark Ambient Concentration for a carcinogen
BACnc	Benchmark Ambient Concentration for a noncarcinogen
BACT	Best Available Control Technology
Board	Air Pollution Control Board
CAA	Clean Air Act, 42 USC 7401 et seq.
CAA Section 112	42 USC 7412
CAA Section 116	42 USC 7416
CAA Section 302	42 USC 7602
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (Federal Superfund Act)
DAQ	Division for Air Quality (KY)
DEP	Department for Environmental Protection (KY)
District	Air Pollution Control District
EA	Environmentally Acceptable, Environmental Acceptability
EAL	Environmentally Acceptable Level
EPA	Environmental Protection Agency (U.S.)
EPCRA	Emergency Planning and Community Right-to-Know Act (Federal)
FEDOOP	Federally Enforceable District Origin Operating Permit
HAP	Hazardous Air Pollutant
HI	Hazard Index
HQ	Hazard Quotient
IARC	International Agency for Research on Cancer
ISC3	Industrial Source Complex (EPA computer model)
IRIS	Integrated Risk Information System (EPA)
IRSL	Initial Risk Screening Level (Michigan)
ITSL	Initial Threshold Screening Level (Michigan)
LC_{50}	Lethal Concentration – 50% (of test animals) (inhalation)
LD_{50}	Lethal Dose – 50% (of test animals) (oral)
LDAR	Leak Detection and Repair
LOAEL	Lowest Observed Adverse Effects Level
MACT	Maximum Achievable Control Technology
MSDS	Material Safety Data Sheet
NIOSH	National Institute of Occupational Safety and Health
NOAEL	No Observed Adverse Effects Level
NTP	National Toxicology Program
OEL	Occupational Exposure Level
OSHA	Occupational Safety and Health Act

P.E.	Professional Engineer
PM	Particulate Matter
REL	Reference Exposure Level
RfC	Reference Concentration (inhalation)
RfD	Reference Dose (oral)
RIA	Regulatory Impact Assessment
RSEI	Risk Screening Environmental Indicator
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendment and Reauthorization Act (Federal)
SIP	State Implementation Plan
STAR	Strategic Toxic Air Reduction
TAC	Toxic Air Contaminant
TAP	Toxic Air Pollutant
T-BAT	Best Available Technology for Toxics
Title V	Title V of the Clean Air Act, 42 USC 7661 et seq.
TLV	Threshold Limit Value
TNRCC	Texas Natural Resources Conservation Commission
t.p.y.	tons per year
TRI	Toxics Release Inventory
UF	Uncertainty Factor
$\mu g/m^3$	micrograms per cubic meter
URE	Unit Risk Estimate
USC	United States Code
VOC	Volatile Organic Compound
WJCCTF	West Jefferson County Community Task Force
WLATS	West Louisville Air Toxics Study